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ARMED SERVICES VOCATIONAL APTITUDE BATTERY (ASVAB):
THE EQUITY OF ASVAB FORM 14 IN THE PREDICTION
OF HIGH SCHOOL COURSE GRADES

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August 1990

Final Report for Period September 1989 - September 1990

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# REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching axisting data sources, gathering and maintaining the data needed, and completting and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducting this burden, to Washington Headquarters Services, Directorate for information and Reports, 12:5 Jerferson Daws Highway, Suite 1204, Artington, VA 2202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (9704-0188), Washington, DC 2005.

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1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYP		
	August 1990	Final - Septer	nber 1989	- September 1990
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Armed Services Vocational Apt	itude Battery (ASVAB): The	Equity of ASVAB	C -	F41689-87-D-0012/5006
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Carl Haywood			}	- <del>-</del>
Joe W/ard				
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Brooks Air Force Base, Texas	78235-5601		]	
11. SUPPLEMENTARY NOTES			1	
12a. DISTRIBUTION/AVAILABILITY S	TATEMENT	<del></del>	12b. DIST	TRIBUTION CODE
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13. ABSTRACT (Maximum 200 words)				_
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14. SUBJECT TERMS				15. NUMBER OF PAGES
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17. SECURITY CLASSIFICATION 18 OF REPORT	SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASS OF ABSTRACT	IFICATION	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassifie	d	UL

Unclassified

#### SUMMARY

This study investigates the equity of the Armed Services Vocational Aptitude Battery (ASVAB) Form 14 in the prediction of high school course grades. Thirty-nine course grades were obtained from approximately 8,000 students enrolled in 50 geographically dispersed high schools.

Subsamples or course grades in this investigation were defined by course name, grade level and the two school years in which students took the courses (1984-85 and 1985-86). The ASVAB Form 14 was administered during the 1984-85 school year. Regression equations were conducted, in an hierarchical manner, for each criterion final course grade. The predictor variables of interest were twelve ASVAB composites as aptitude measures, gender group membership, ethnic group membership, the gender by ASVAB two-way interaction variables, the ethnicity by ASVAB two-way interaction variables, the gender by ethnicity two-way interaction variables, and the ASVAB by gender by ethnicity three-way interaction variables.

The results of the equity analyses are discussed in terms of which ASVAB composite score was included in the regression equations, the course name, the grade level, the year the course was taken and which gender and ethnic subgroups were investigated.

The findings of this study generally indicated that all the ASVAB composites need gender and/or ethnic information in the prediction equations for final course grades. Typically, either slope or intercept differences were evidenced for the gender or ethnic subgroups across most subsamples for each of the ASVAB composites. If intercept differences were indicated, generally females or Whites would be underpredicted if a common regression line were to be used, while males or minority group members would be overpredicted if a common regression line were used.

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#### PREFACE

This research and development effort was conducted under contract No. F41689-87-D-0012/5006, Task 6, Validity and Equity of the High School ASVAB.

The authors wish to express their appreciation to Dr. Tom Watson, Dr. Malcolm Ree, and Dr. Lonnie Valentine of the USAF Human Resources Laboratory and to Dr. John Welsh of Operational Technologies Corporation.

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# ARMED SERVICES VOCATIONAL APTITUDE BATTERY (ASVAB): THE EQUITY OF ASVAB FORM 14 IN THE PREDICTION OF HIGH SCHOOL COURSE GRADES

#### I. INTRODUCTION

The operational Armed Services Vocational Aptitude Battery (ASVAB) is the multiple aptitude battery used for selection and classification of enlisted personnel for all branches of the Armed Services and is also used in a high school testing program by the joint services.

The operational and high school ASVAL forms are developed to be content and statistically parallel to the reference form ASVAB 8a. Results of equating studies of these sets of forms show that ASVAB versions developed after 1980 are content and statistically parallel (Prestwood, Vale, Massey, & Welsh, 1985). An important characteristic of any test is that it is equitable; that the scores are equally valid for all ethnic or gender Anastasi (1976) reports that there has been research conducted on possible subgroup differences in the predictive meaning of test scores since the mid-1960's. The first concern equity analyses, called slope bias, looks at validity coefficients being systematically and significantly different for The slope of the regression lines are equivalent the subgroups. to the correlation coefficients when the criterion and predictor scores are standardized. The second issue in equity research, called intercept bias, addresses systematic differences between subgroup mean scores on the test predictor and the criterion. test exhibiting systematic intercept bias has similar validity coefficients for the different subgroups, but it underpredicts or overpredicts criterion performance for a particular Intercept bias discriminates against the group with the higher if a common regression line is used to predict intercept Thus, the importance of performance on the criterion variable. equity in test-score use is that it predicts a given criterion variable with similar accuracy for males, females, majority members, and ethnic minority members. The goal of equity analysis of the high school ASVAB, then, is to determine whether the ASVAB predictive score information for final course grades is equally valid, regardless of ethnic or gender group membership.

The Air Force high school testing program began in 1962 in order to provide school guidance counselors with student aptitude information and to identify potential Air Force enlistees. The Army and Navy also wanted to test in the high schools during this time, using their own test batteries. This required considerable testing time which was burdensome for the schools. Therefore, in 1966, a joint service committee of measurement and evaluation experts was asked to develop and standardize an aptitude battery for use by all the branches of the Armed Forces for the High

School Testing Program. The goal in the development of the initial ASVAB was to offer aptitude measures which would include content domains necessary for classifications within each of the separate services. By September 1968, ASVAB-1 was accepted for use in the High School Testing Program (Weeks, Mullins, & Vitola, 1975).

Today the ASVAB is offered to the nation's high schools by the Department of Defense (DoD) free of charge. It is administered to over 1.3 million students in approximately 14,000 schools per year. ASVAB high school composite scores are used by counselors and students in career exploration, while the Armed Forces Qualification Test (AFQT) is used by the military to identify students who are qualified for enlistment into the Armed Forces (U.S. Military Entrance Processing Command, 1984). Thus, it is necessary to conduct research in the area of equity to insure that test bias against certain subgroups of people does not exist.

Past equity research has used the operational composites derived from the ASVAB as predictor variables. Some of these investigations found nonsignificant slope differences for gender or ethnic subgroup members (Maier & Curia, 1986; McLaughlin, Rossmeissl, Wise, Brandt, & Wang, 1984), while other studies found intercept differences between Blacks and Whites and between males and females (Booth-Kewley, Foley & Swanson, 1984; Dunbar & Novick, 1984). Studies which have shown significant intercept differences between gender or ethnic subgroups attributed these results to small subgroup sample sizes (Dunbar & Novick, 1984; Booth-Kewley, Foley, & Swanson, 1984). However, it should be noted that the Dunbar & Novick investigation used a different type of analysis, the Johnson-Neyman procedure, which looked at test bias at a particular cutting score point as opposed to looking at bias across all score points.

One specific equity investigation has used the high school composites for ASVAB Form 14. Maier and Truss (1984) examined the validity of the high school composites for predicting Marine Corps training course grades. In addition, they evaluated gender and racial effects on the validity of these composites. revealed that the slopes for all subgroups did not differ. intercept differences were found for the ethnic groups or for males and females in the prediction of training course grades in nontraditional female occupations (mechanical and electronics). However, the composites did underpredict female performance in some traditional female occupations, such as clerical and food The authors noted that in most courses the number of services. females was small, with fewer than 25 enrolled. Even though significant findings existed, further analyses with larger female was needed to determine if overprediction underprediction of females was evident.

Since past research has usually investigated the equity of the operational ASVAB composites and has reported subgroup effects on these validity coefficients, an investigation of the equity of high school ASVAB composite scores with sufficient subgroup representation is warranted. Thus, the scope of this study is to investigate the equity of various ASVAB Form accomposite scores in predicting final course grades for freshmen, sophomores, juniors, and seniors enrolled in geographically dispersed high schools.

## II. METHOD

# Subjects

The original sample was 8,390 high school students tested on ASVAB Form 14 during school year 1984-85 and for whom school year 1984-85 and 1985-86 course grades were available. The sample was 52% female (N=4,368). 67% White (N=5,650), 16% Black (N=1,343), and 13% Hispanic (N=1,096). Thirty percent of the sample were freshmen, 30% were sophomores, 22% juniors, and 18% seniors at the time of ASVAB testing.

## Measures

# Predictors

ASVAB-14 is a group administered, paper and pencil multiple aptitude battery. The battery contains ten subtests; eight power test and two speeded. The content of each subtest, the number of items, and the time limits allowed are shown in Table 1.

Twelve composites were constructed from the subtest standard scores (see Table 2). The Verbal, Math, Technical and Perceptual Speed composites were developed using results from factor Academic Ability is a combination of subtests from the analysis. Verbal and Math composites and is used as an indicator of academic ability. Mechanical and Crafts; Business and Clerical; Electronics and Electrical; and Health, Social, and Technology were derived through analysis of validity studies involving prediction of success in military technical training programs. The Armed Forces Qualification Test (AFQT) is used by all the armed services to select enlisted personnel. The subtest composite is a linearly weighted composite developed in an investigation of the validity of ASVAB Form 14 for predicting high school course grades. A unique composite exists for each course (see Welsh, Fairbank, & Sawin, in preparation). General composite is an experimental measure of general ability. Seven of the composites are the current high school composites: Academic Ability; Verbal; Math: Mechanical and Crafts; Business and Clerical; Electronics and Electrical; and Health, Social and Technology.

Table 1. Description of ASVAB Form 14 Subtests

		# of	Administrat	ion	
Subtest	Content	items	(minutes)	Туре	
AFOT Subtests					
Arithmetic Reasoning (AR)	Measures ability to solve arithmetic word problems.	30	36	power	
Word Knowledge (WK)	Measures ability to select meanings of words.	35	11	pcwer	
Paragraph Comprehension (PC)	Measures ability to obtain information from written passages.	15	13	power	
Mathematics Knowledge (MK)	Measures knowledge of high school mathematics principles.	25	24	power	
Non-AFOT Subtests					
General Science (GS)	Measures knowledge of physical, chemical and biological sciences.	25	11	power	
Numerical Operations (NO)	Measures ability to perform simple computations in a speeded context.	50	3	speed	

Table 1. (Concluded)

			Administrat	ion
Subtest	Content	# of items	time (minutes)	Type
Coding Speed (CS)	Measures ability to match similar sets of numbers with words in a speeded context	84	7	speed
Auto and Shop Information (AS)	Measures knowledge of automobiles, tools, and shop terminology and practices.	25	11	power
Mechanical Comprehension (MC)	Measures knowledge of mechanical and physical principals.	25	19	power
Electronics Information (EI)	Measures knowledge of electricity and electronics.	25	9	power

ASVAB composites	Subtest scores included in calculations
High School Composites	
<u>Academic</u>	
Academic Ability (AA)	AR+VE (VE=WK+PC)
Verbal (VERB)	WK+PC+GS
Math (MTH)	AR+MK
Occupational	
Mechanical & Crafts 4&C	AR+AS+MC+EI
Business & Clerical E&C)	VE+CS+MK
Electronics & Electrical (F&E)	GS+A) K+EI
Health, Social & Tec. (Harm)	AR+V, AC
AFQT Selector Composite	. E+MK+2VE
Perceptual Speed Composite (18)	NO+CS
Technical Composite (TEC)	AS+MC+EI
General Composite (GEN)	GS+AR+WK+PC+NO+CS+ AS+MK+MC+EI <sup>a</sup>
Subtest Composite (SUB)	GS+AR+WK+PC+NO+CS+ AS+MK+MC+EID
domnosito is ha	sod on provious principl

The General Composite is based on previous principle components analysis (see Ree, 1989).

Linearly weighted composite.

### Criterion

The criterion variable was final course grades obtained in courses that were not honors level. Thirty-nine representative high school courses were identified. These courses fell within one of three general categories: general education, business and clerical, and trade and specialty. Courses grades used were 'A,' 'B,' 'C,' 'D,' and 'F,' and were given the numeric values of '4,' '3,' '2,' '1,' and '0,' respectively. Two years of grades were obtained, one for the year of ASVAB testing (1984-85) and the other for the year immediately following ASVAB testing (1985-86). The list of high school courses can be examined in Table 3.

Table 3. High School Courses by School Year and Subject Samplea

C - 11 - 1		1984	-1985		1985-1986			
Course	Fr	So	Jr	Sr	Fr	So	Jr	
General Educ								
Eng I-IV	**	**	**	**	**	**	**	
Gen Math	**	**	**	**	**	**	**	
Algebra	**	**	**	**	**	**	**	
Geometry		**	**	**	**	**	**	
Calculus				*			**	
Gen Science	**	**	**	**	**	**	**	
Biology	**	**	**	**	**	**	**	
Chemistry Physics		**	**	**	A M	**	**	
Gov & Civics	**	**	**	**	*	**	**	
History	**	**	**	**	**	**	**	
Foreign Lang	**	**	**	**	**	**	**	
Bus & Clerical								
Bus Math		*		İ	*			
Secy & Ofc		} ^	Ì	**		*	**	
Typing & WP	**	**	**	**	**	**	**	
Acct & Book			**	**	}	**	**	
Marketing			1					
Bus Data Proc			1					
Data Process				Ì	Ì			
Trade & Spec						1		
Home Econ	**	**	**	**	**	**	**	
Shop	*	*	*	*	*	*	**	
Dit & Com Art		*				*	1	
Computer Prog			**	**		**	**	
Voc Agr	*	*			*	*		
Air Con & Heat								
Auto & Mech						]	j	
Elec Trades				<u> </u>		i		
Metal Trades		İ						
Piping Trades							1	
Bldg Trades								
Welding								
Engine Repair								
Health Occup		1			1		1	
Dental Aide						}		
Nursing Aide								
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Table 3. (Concluded)

Course		1984	-1985	1985-1986			
Course	Fr	So	Jr	Sr	Fr	So	Jr
General Educ							
Phys Ther Aide Vet Asst Med Lab Asst							

<sup>&</sup>lt;sup>a</sup>Blank cells indicate samples not used in validity analyses due to small numbers of cases; one asterisk means that the ASVAB composites were valid predictors ( $p \le .05$ ); two asterisks mean that the courses had adequate subgroup sample sizes for equity analyses and at least one ASVAB composite was a valid predictor ( $p \le .05$ ).

#### Procedure

ASVAB-14 scores, student name, and the name and address of the high school the student attended at the time of ASVAB testing were obtained from the United States Military Entrance Processing Command (USMEPCOM). Machine scorable answer sheets containing individual student's names and the 39 course titles were sent to school guidance counselors who had agreed to provide course grades. Counselors received one dollar for each completed form. Completed forms were optically scanned and the data merged with the ASVAB scores.

As can be noted from Table 3, 112 course samples of the 273 were identified as being validly predicted by at least one ASVAB composite at the p $\leq$ .05 significance level. Of these 112 samples, 94 were retained for the equity analyses because the subgroups of interest had sufficient representation. Thus, 94 sample course grades were used in the equity analyses as the criterion variable. The previously mentioned twelve ASVAB composites were the predictor variables with gender and ethnic group membership being the subgroups of interest.

## Analyses

The first analytic step was to calculate summary statistics on the twelve ASVAB composites for each of the gender and ethnic subgroups. This procedure was accomplished to look at each subgroup's mean predictor scores.

Next, a general linear model procedure tested hypotheses about the contributions of aptitude scores, sex group membership, and ethnic group membership in the prediction of the final course grade criterion variable (Ward & Jennings, 1979). The first step conducting these sequential linear models tests was to determine how to define the ethnic and gender variables in the initial full model. The initial starting model to be used was determined by the numbers of cases in each of the sex by ethnicity categories. If less than 50 cases appeared within a particular sex by ethnicity category (eg., Hispanic females), then ethnicity was redefined. The notion was to obtain as much information about ethnicity as possible until it was necessary to omit or combine ethnic groups. Thus, there were nine different types of possible starting models, each defining gender and ethnicity predictor variables in a specific manner. These nine possible starting models are presented in Table 4.

For example, if a sample possessed 50 or more cases within each of the sex by ethnicity categories, then the Type #1 of starting models would be used. This type of starting model would include the following variables within the prediction equation:

Y = u + ASVAB + M + F + W + B + H + M\*W + F\*W + M\*B + F\*B + M\*H + F\*H + ASVAB\*M + ASVAB\*F + ASVAB\*W + ASVAB\*B + ASVAB\*H + ASVAB\*M\*W + ASVAB\*F\*W + ASVAB\*F\*B + ASVAB\*M\*H + ASVAB\*F\*H

with,

u = unit vector,
ASVAB = ASVAB composite score,
M = male,
F = female,

W = White,

B = Black

H = Hispanic.

Restricted models were defined by removing specified predictor variables. The restricted model was then tested against the full model by using sequential F-test comparisons; these comparisons were a means of investigating hypotheses of interest. Thus, if the initial full model proved not to be significantly different from the restricted model in predicting course grade, the restricted model became the full model and the next restricted model was tested. The various model specifications, the hypotheses of interest, and hierarchical model tests are presented in Appendix B.

Table 4. Nine Types of Starting Full Models

Variables			Types	of	Start	ing M	odels		
	1 <sup>a</sup>	2	3	4	5	6	7	8	9
Unit Vector	*p	*	*	*	*	*	*	*	*
ASVAB Composite	*	*	*	*	*	*	*	*	*
Sex (male,									
female)	*	*	*	*					*
Ethnicity 1	*				*				
(Wh, Bl, His)									
Ethnicity 2		*				*			
(Wh, Bl)									
Ethnicity 3			*				*		
(Wh, His)									
Ethnicity 4				*				*	
(Wh, Non-Wh)									
Sex * Ethn 1	*								
Sex * Ethn 2		*							
Sex * Ethn 3			*						
Sex * Ethn 4				*					
ASVAB * Sex	*	*	*	*					*
ASVAB * Ethn 1	*				*				
ASVAB * Ethn 2		*				*			
ASVAB * Ethn 3			*				*		
ASVAB * Ethn 4				*				*	
ASVAB * Sex *									
Ethn 1	*								
ASVAB * Sex *									
Ethn 2		*							
ASVAB * Sex *									
Ethn 3			*						
ASVAB * Sex *									
Ethn 4				*					

dNumbers denote the nine possible types of starting full models.

bAstericks indicate which variable is included in the prediction equation of the particular type of initial full model.

F-ratios were calculated as means of statistical comparisons. In order to reduce the experiment-wise error rate, the alpha level was set at p $\leq$ .001 for model comparisons which initially began testing the contributions of the three-way interaction variables. Models which initially tested the contribution of the two-way sex and ethnicity interaction variables set alpha at

p≤.01 (i.e., Models 7 and 10). The following F-ratio was used as a means of evaluating the significant differences between model comparisons (Bottenberg & Ward, 1963):

$$F = \frac{(R_f^2 - R_r^2)/df_1}{(1 - R_f^2)/df_2}$$

where Rf2

 $R_{f_2}^2$  = squared multiple correlation of the full model

R<sub>r</sub><sup>2</sup> = squared multiple correlation of the restricted model
df<sub>1</sub> = number of independent predictor variables in the full

model minus the number of independent predictor

variables in the restricted model

df<sub>2</sub> = total number of cases minus the number of independent
 predictor variables in the full model.

The analytic software program that was employed allowed predictor variables to be included in the equations if the variables did not possess a high degree of collinearity. To insure that all variables were included in the prediction models, the tolerance level was set at .00000001 (Norusis, 1988).

#### III. RESULTS

#### Sample Characteristics

Due to the exclusion of honors level courses, the final sample used in these equity analyses consisted of 7,662 subjects. These subjects were 71% White (N=5,489), 16% Black (N=1,259) and 13% Hispanic (N=1,014). The total sample was nearly equal in sex representation, with 48% males (N=3,730)and 52% females (N=4,032). Summary statistics of the 12 ASVAB composite scores revealed that, on the average, Blacks typically obtained lower aptitude scores than Whites and Hispanics; and Hispanic mean scores were lower than White mean scores. Average aptitude scores were higher for White and Black males than their female counterparts within the Mechanical and Crafts, Electronics and Social, and Technology, and Electrical, Health, Technical. composites. White and Black females, on the average, had higher scores than White and Black males for the Business and Clerical and Perceptual Speed composites. Hispanic males obtained higher average scores than Hispanic females on the Mechanical and Crafts and Technical composites, while Hispanic females obtained higher average scores than males on the Academic Ability, AFQT, Verbal, Math, Business and Clerical, and Perceptual Speed composites (see Appendix C).

The results of the general linear models tests are presented next, organized according to the ASVAB aptitude composite that was used as the predictor variable in the equations. Summary tables follow each ASVAB composite (Tables 5 through 16); and, a summary of these results are also presented in Appendix D.

# Academic Ability High School Composite

# English I - IV

Freshmen 1984-85. Using the Academic Ability high school composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Academic Ability composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's English grade, no differential validity was evidenced for the ethnicity by Academic Ability score two-way interaction variables or the sex by Academic Ability score two-way interaction variables.

<u>Freshmen 1985-86</u>. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .036 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Academic Ability composite as the predictor variable, freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using this ASVAB composite resulted in statistically significant slope differences among the White, Black and Hispanic regression lines. With the  $R^2$  change for the Model 10 and Model 11 comparison approximating .006 (p $\leq$ .001), Model 10 would be the best prediction system for this sample. Thus, the change in the English grade per unit change in the Academic Ability high school composite was significantly different for White, Black and Hispanic freshmen.

<u>Sophomores 1984-85</u>. When the model comparisons were made for gender group differences, using the Academic Ability composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .006 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's

English grade. Thus, the change in the English grade per unit change in the ASVAB Academic Ability composite was significantly different for this year' sophomore males and females.

Using the Academic Abi ity composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

<u>Sophomores 1985-86</u>. The model comparisons for gender group differences using the Academic Ability composite showed statistically significant slope differences between the male and female regression lines, with Model 7 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\leq$ .001). Thus, the change in the English grade per unit change in the ASVAB Academic Ability composite was significantly different for these sophomore males and females.

Statistically significant intercept differences resulted among the White, Black and Hispanic ethnic subgroups. With an  $\mathbb{R}^2$  change of .008 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Academic Ability composite were used in the prediction of English course grade, White and Hispanic sophomores would be consistently underpredicted on the criterion, while Black sophomores would be consistently overpredicted.

<u>Juniors 1984-85</u>. When the model comparisons were made for gender group differences, using the Academic Ability high school composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the Academic Ability high school composite was significantly different for these junior males and females.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hispanic juniors. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of English course grade for these individuals.

<u>Juniors 1985-86</u>. As in the 1984-85 school year, using the Academic Ability composite in the equations showed statistically significant slope differences between the male and female

regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\le$ .001), with Model 7 being the best prediction equation for English grade. Thus, the change in the English grade per unit change in the Academic Ability composite was also significantly different for these junior males and females.

Using the Academic Ability composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. The ASVAB Academic Ability composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $R^2$  change of .028 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Academic Ability composite as the aptitude predictor variable, senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

#### General Math

<u>Freshmen 1984-85</u>. This sample, using the Academic Ability high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members, with an  $R^2$  change of .009 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Thus, Model 8 would be the best prediction equation for this General Math sample. Using the Academic Ability composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their General Math grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of General Math course grades obtained by freshmen during this school year.

Freshmen 1985-86. For this sample, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Models 9 or 12 containing only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Academic Ability composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .035 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Academic Ability composite were used in the prediction of General Math course grade, female sophomores would be consistently underpredicted on the criterion, while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Academic Ability composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the Academic Ability high school composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

<u>Juniors 1985-86</u>. At first, using this composite with this General Math sample was, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Academic Ability composite as the aptitude predictor variable resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .028 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for this sample. Thus, if a common

regression line using the Academic Ability composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Academic Ability composite score, could be used in predicting General Math course grade for these individuals.

Seniors 1984-85. At first, using this composite with this General Math sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

#### Algebra

Freshmen 1984-85. Using the ASVAB Academic Ability composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups with an  $R^2$  change of .040 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Freshmen 1985-86. With the Academic Ability composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in  $R^2$  changes of .042 (p $\leq$ .001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Sophomores 1984-85. In this 1984-85 sample, using the Academic Ability high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .026 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

<u>Sophomores 1985-86</u>. Statistically significant intercept differences resulted between the male and female subgroups. With an  $\mathbb{R}^2$  change of .018 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Academic Ability composite were used in the prediction of Algebra course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

This sample resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Algebra course grade for these sophomores.

Juniors 1984-85. In this 1984-85 sample, using the Academic Ability high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .030 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Academic Ability composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for these juniors.

Saniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Academic Ability composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .039 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these seniors. Using this composite, senior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12 could be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

## Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, using the Academic Ability composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Model 9 or 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. As in the Freshmen sample, using the Academic Ability composite resulted in no statistically significant slope of intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Academic Ability measure, composite the aptitude the as results statistically significant intercept differences for the gender group members. With an R<sup>2</sup> change of .024 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Academic Ability composite within the equations, the results showed statistically significant slope differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for the Model 10 and Model 11 comparison was approximately .021 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB Academic Ability composite was significantly different for these White and Black sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Academic Ability composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .021 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these juniors. Using this composite, junior females would be consistently underpredicted in their Geometry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using the Academic Ability composite resulted in no statistically significant slope or intercept differences for the two ethnic groups. Again Model 12 could be used in the prediction of Geometry course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in some of the other Geometry samples, using the Academic Ability composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Geometry course grade for these juniors.

When the model comparisons were made for ethnic group differences, using the Academic Ability composite, the results showed statistically significant slope differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .060 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB Academic Ability composite was significantly different for these White and Nonwhite juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including etnnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Academic Ability composite equations also resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

#### Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The Academic Ability composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

#### General Science

Using the Academic Ability high school Freshmen 1984-85. composite with this sample, the results showed no statistically significant differences between the Model 2 VS Model 4 included the unit vector, the Academic comparison. Ability composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by Academic Ability score two-way interaction variables or the sex by Academic Ability score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Academic Ability composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12, which contained the unit vector and the Academic Ability composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

In this 1984-85 sample, using the Sophomores 1984-85. Academic Ability high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an R2 change of .040 (p<.001) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison. Using this composite, prediction equation for this sample. sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the Academic Ability composite as the aptitude aptitude measure resulted in no statistically significant slope or intercept differences for the

gender group or ethnic group members. Model 9 or 12 could be used in the prediction of General Science course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Academic Ability composite within the prediction equation resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Science course grade for these juniors.

With the Academic Ability composite as the aptitude measure, the results showed statistically significant intercept differences for the two ethnic subgroups. With an  $\mathbb{R}^2$  change of .055 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for General Science course grade for these juniors. Using this composite, White juniors would be consistently underpredicted in their General Science grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This Academic Ability composite prediction equation resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. As in some of the previous samples, Model 9 or 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the Academic Ability composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Academic Ability composite, could be used in the prediction of General Science course grade for these seniors.

# Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Norwhite ethnic group differences were studied by not including the gender variables in the equations. This Academic Ability composite equation also resulted in no statistically significant slope or intercept differences for the gender group

or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Biology course grades obtained by freshmen in 1985-86.

<u>Freshmen 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .028 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Academic Ability composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

<u>Sophomores 1984-85.</u> The use of this composite with this sample also resulted in statistically significant intercept differences in the prediction equations for the two sophomore gender groups, with an  $R^2$  change of .018 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Academic Ability composite as the predictor variable, sophomore females would be consistently urderpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the Academic Ability composite as the predictor composite, results showed statistically significant differences in the prediction equations for the White, Black and Hispanic ethnic groups, with an  $\mathbb{R}^2$  change of .008 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using the Academic Ability composite as the predictor variable, Black and Hispanic sophomores would be consistently underpredicted in their Biology grades if the common regression line were used, while White sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept di ferences between the gender group members and an  $\mathbb{R}^2$  change of .053 (p $\leq$ .01)

for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

<u>Juniors 1984-85</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $\mathbb{R}^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Academic Ability composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed rostatistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

Juniors 1985-86. This sample tested only for gender group differences. Using the Academic Ability composite as the predictor variable resulted in statistically significant intercept differences for the gender groups. With an R2 change of .042 (p≤.01) for the Model 8 vs Model 9 comparison, would be the best prediction equation of Biology course grade for Using this composite, junior females would be these juniors. consistently underpredicted in their Biology grades if the common regression line were used, while junior males would consistently overpredicted if a common regression line were used.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Academic Ability composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .032 and .040 (p≤.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these

seniors. Using this composite, senior females would be consistently underpredicted in their Biology grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Academic Ability composite as the aptitude measure were used in the prediction of Biology course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

#### Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Academic Ability composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Academic Ability composite, could be used in the prediction of Chemistry course grades obtained by freshmen in this year.

Sophomores 1984-85. This sample also tested only for cender group differences. Again, with the Academic Ability composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Chemistry course grades obtained by these sophomores.

Sophomores 1985-86. This sample tested only for gender group differences. Using the Academic Ability composite as the statistically predictor variable, t.he results indicated significant intercept differences for the gender groups.  $R^2$  change of .048 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Academic Ability composite in the equations resulted statistically significant intercept differences for the gender and two ethnic group members. With R2 changes of .047 and .019 (p≤.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these juniors. Using this composite, females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Academic Ability composite as the aptitude measure were used in the prediction of Chemistry course grade, White juniors would be consistently underpredicted on this criterion, while Nonwhite juniors would be consistently overpredicted.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this resulted statistically significant intercept composite in differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .060 (p $\leq$ .01) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison. prediction equation for this sample. Using the Academic Ability composite as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

<u>Seniors 1984-85</u>. As in the previous samples using the Academic Ability composite, the results showed no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

When the model comparisons were made for ethnic group differences, using the Academic Ability composite, the results showed statistically significant slope differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .038 ( $p \le .01$ ), with Model 10 being the best prediction equation for this sample's Chemistry grade. Thus, the change in the Chemistry grade per unit change in the ASVAB Academic Ability composite was significantly different for these White and Nonwhite seniors.

## Physics I - II

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .038 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the

Academic Ability composite as the predictor variable, junior females would be consistently underpredicted in their Physics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. This sample tested only for gender group differences. The Academic Ability composite equations again resulted in statistically significant intercept differences for the gender groups. An  $R^2$  change of .042 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Academic Ability composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The Academic Ability composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Academic Ability composite, could be used in the prediction of Government course grades obtained by freshmen for this year.

Sophomore 1984-85. This sample also tested only for gender group differences. Again, using the Academic Ability composite as the predictor variable, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Government course grade for these sophomores.

At first, using this composite with this Sophomores 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this Ability Academic composite in the equations resulted statistically significant intercept differences for the gender and two ethnic group members. With R2 changes of .030 and .019 (p≤.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression Conversely, if a common regression line using line were used. the Academic Ability composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, the use of this Academic Ability composite in the equations resulted in statistically significant intercept differences for only the gender subgroup. With  $R^2$  changes of .020 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Models 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Juniors 1985-86. This sample, using the Academic Ability high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .030 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 was the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Seniors 1984-85. Similar to the previous samples, this sample, using the Academic Ability composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Again, Models 9 or 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

# **History**

Freshmen 1984-85. The use of the ASVAB Academic Ability composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .034 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the Academic Ability high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .009 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the Academic Ability high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .020 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The se of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

<u>Sophomores 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .032 (p $\leq$ .001) for the Mcdel 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Academic Ability composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Academic Ability composite, the results showed statistically significant slope differences between the White, Black and Hispanic regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .009 (p $\leq$ .001), with Model 10 being the best prediction equation for this sample's History grade. Thus, the change in the History grade per unit change in the ASVAB Academic Ability composite was significantly different for these White, Black and Hispanic sophomores.

<u>Juniors 1984-85</u>. Like the 1985-86 freshmen sample, this sample, using the Academic Ability high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .033 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including

the gender variables in the equations. Using the Academic Ability high school composite score as the aptitude predictor variable, results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .040 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Academic Ability composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of History course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $R^2$  change of .026 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Academic Ability composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

# Foreign Language

Freshmen 1984-85. The use of the ASVAB Academic Ability composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .057 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $\mathbb{R}^2$  change of .021 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. the Academic Ability composite in the prediction equations the results showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an R<sup>2</sup> change of .049 (p≤.01) for the Model 8 vs Model Therefore, Model 8 would be the best prediction 9 comparison. equation for this sample. Using this composite as the aptitude freshmen females would be consistently predictor variable, underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Ability prediction equations showed statistically Academic significant intercept differences between the male and female The R<sup>2</sup> change for the Model 8 and Model 9 regression lines. comparison was approximately .085 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language Thus, using this composite as the aptitude measure, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression li. : were used.

When the model comparisons were made for ethnic group differences, the use of this Academic Ability composite in the prediction equations also resulted in statistically significant intercept differences for the ethnic group members. With an  $R^2$  change of .012 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system for these sophomores' Foreign Language course grade. Again, using this composite as the aptitude measure, White and Hispanic sophomores would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. Using the ASVAB Academic Ability composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .059 (p $\leq$ .01) for the Model  $\Omega$  vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

<u>Juniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. of the Academic Ability composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The R2 change for the Model 8 and Model 9 comparison was approximately .078 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the Academic Ability predictor composite also resulted in statistically significant intercept differences for the ethnic group members. The  $\mathbb{R}^2$  change for the Model 11 vs

Model 12 comparison was .020 ( $p \le .01$ ); therefore, Model 11 would be the best prediction equation for these juniors' Foreign Language course grade. Using this composite White and Hispanic juniors would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Academic prediction equations Ability resulted statistically in significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .047 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Academic Ability composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Foreign Language course grade for these individuals.

#### Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite ethnic group differences. Using the Academic Ability composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Academic Ability composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested only for White and Nonwhite ethnic group differences. Using the Academic Ability composite prediction equations the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 12, which contained the unit vector and the ASVAB Academic Ability composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Academic Ability composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Typing course grade for these freshmen.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Academic prediction equations resulted statistically in significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .033 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. using this predictor composite, freshmen females would consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

<u>Sophomores 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The results again showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup>

change for the Model 8 and Model 9 comparison was approximately .043 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Academic Ability composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

<u>Juniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The  ${\rm R}^2$ change for the Model 8 and Model 9 comparison was approximately .064  $(p \le .01)$ , with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite

score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

At first, using this composite with this <u>Juniors 1985-86</u>. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The R2 change for the Model 8 and Model 9 comparison was approximately .044 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Academic Ability composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Academic Ability composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .028 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

# Accounting and Bockkeeping

Sophomores 1985-86. This sample tested only for gender group differences. The use of the ASVAB Academic Ability composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .055 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

This sample also tested only for gender <u>Juniors 1984-85.</u> group differences. Again, using the Academic Ability composite equations, prediction the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .092 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested for gender group differences. As in the previous sample, using the Academic Ability composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $\mathbb{R}^2$  change of .034 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. Like the junior samples, this sample tested for gender group differences. Using the Academic Ability composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .035 (p<.01) for the Model 3 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Academic Ability composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .045 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Academic Ability composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $\mathbb{R}^2$  change of .072 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Academic Ability composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an R2 change of .061 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Academic Ability composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Academic Ability composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R<sup>2</sup> change  $(p \le .01)$ for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line ware used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Academic Ability composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An R<sup>2</sup> change of .032

 $(p \le .01)$  for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics grade for these sophomores. Using this composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied including the gender variables in the equations. The use of the Academic Ability composite prediction equations resulted in statistically significant intercept differences for the gender group members. The ASVAB Academic Ability composite showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an change of .062 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this Using this composite, sophomore females would consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Academic Ability composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Academic Ability composite prediction equations resulted statistically significant intercept differences for the gender The ASVAB Academic Ability composite showed group members. statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R<sup>2</sup> change of .031 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this Using this composite, junior females would consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Academic Ability composite, the results showed no

statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Juniors 1985-86. As in the previous junior sample, at first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the Academic Ability composite equations, resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .111 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Academic Ability composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Academic Ability composite equations resulted in statistically significant intercept differences for the gender group members. An R<sup>2</sup> change of .042 (p≤.01) was obtained for the Model 8 vs Model 9 comparison: therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Academic Ability composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

#### Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Academic Ability composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .076 (p<.01) was obtained for the Mcdel 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample also tested for gender group differences. Again, the Academic Ability composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Academic Ability composite, could be used in the prediction of Computer Programming course grades obtained by juniors for this year.

<u>Juniors 1985-86</u>. Collapsing across the ethnic groups, the model comparisons tested for gender group differences. Using the Ability predictor composite, the results Academic statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R<sup>2</sup> change of .113 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using composite junior this females would consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. As in the previous Computer Programming samples, this sample tested for gender group differences. The Academic Ability composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Academic Ability composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

Table 5. Summary of Equity Findings for Prediction of High School Course Grades by Academic Ability High School Composite

Course		Sex	Ethnicity	Sex*Ethnicity
English I-1	IV.			
Fresh	84-85	NS	NS	1
Fresh	85-86	I	s	NS
Soph	84-85	S	E	NS
Soph	85-86	S	1	NS
J۲	84-85	S	E	i NS
٦r	85-86	I	E	NS
\$r	84-85	1	E	NS
General Mai	th			
Fresh	84-85	Ī	E	NS
Fresh	85-86	Ė	Ē	NS
Soph	84 - 85	Ē	Ē	NS
Soph	85-86	ī	Ε	NS
Jr	84 - 85	Ē	E	NS
٦٠	85-86	ĩ	Ē	NS
Sr	84-85	Ë	E	NS
Algebra				<del></del>
Fresh	84-85	ı	Ε	NS
Fresh	85-86	i	E	NS
Soph	84 - 85	i	Ē	NS
Soph	85-86	i	έ	NS
J۲	84 - 85	i	Ē	NS
Jr	85-86	Ē	E	NS
Sr	84-85	1	E	NS
Geometry	<del></del> j-		1	
Fresh	85 - 86	Ε	ŧ	NS
Soph	84 - 85	Ē	E	NS
Soph	85 - 86	Ī	S	his
J۳	84-85	1	ε	NS
٦r	85-86	E	S	NS
\$r	84-85	E	E	NS
Calculus				
11	85-86	E	NT	NS
General Sc	ience			
Fresh	84-85	NS	NS	1
Fresh	85-86 l	E	E	NS
\$oph	84 - 85	1	ĺξ	NS
Soph	85-86	Ė	E	NS
J٢	84-85	E	1	NS
٦r	85 - 86	Ē	E	NS
Sr	84 - 85	Ē	NT	NS

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; Nf = Not tested due to small sample sizes.

Table 5. (Continued)

Course		Sex	Ethnicity	Sex*Ethnicity
Biology				
fresh	84-85	E	E	NS
Fresh	85-86	1	ĺΕ	i NS
Soph	84-85	İ	i	NS
Soph	85-86	i	€	NS
Jr	84-85	i	E	NS
Jr	85-86	ī	NT	NS
Sr	84-85	i	1	NS
Chemistry				
Fresh	85-86	E	NT NT	NS
Soph	84-85	E	NT	NS
Soph	85-86	1	NT	NS
٦r	84 - 85	1	1	NS
ηL	85-86	:	Ε	NS
Sr	84 - 85	E	s	NS
Physics				
٦r	85-86	1	NT	NS
	84 - 85	1	NT	ИЅ
Government				
fresh	84 - 85	E	NT	NS
Soph	84 - 85	Ε	NT	NS
Soph	85-86	I	1	NS
Jr	84 - 85	I	E	HS
Jr	85-86	ī	E	NS
\$r	84-85	E	E	NS
History				
Fresh	84-85	1	E	NS
Fresh	85-86	i	E	NS
Soph	84 - 85	ī	E	NS
\$oph	85-86	1	S	NS
٦r	b4-85	I	E	NS
\$r \$≀	85 - 36 84 - 85	I E	E 1	NS NS
Foreign La	_ +			<del></del>
Fresh	84 - 85	1	1	NS
Fresh	85-86	i	ε	NS NS
Soph	84 - 85	i		NS
	85 - 86	i	Ė	NS
Soph Jr	84-85	i	i	NS
Jr Jr	85-86	i	Ė	NS
3r Sr	P'-85	Ë	Ē	NS
Secretary	& Ofc			
Jr	85-86	NT	Ε	NS
Sr	84-85	NT	Ē	NS

Note, NS  $\times$  Not significant; 1 = intercept differences; S  $\times$  Slope differences; E = Equitable test, no significant slope or intercept differences found; NT  $\times$  Not tested due to small sample sizes.

Table 5. (Concluded)

Course		Sex	Ethnicity	Sex*Ethnicity
Typing				
Fresh	84-85	E	Ε	NS
Fresh	85 - 86	1	E	NS
Soph	84 - 85	1	E	NS
Soph	85-86	E	E	NS
Jr	84-85	ī	E	NS
ηL	85-86	I	Æ	NS
Sr	84 - 85	I	NT	NS
Accounting				
Soph	85-86	I	NT	NS
٦r	84-85	1	NT	NS
J٢	85-86	1	NT	NS
\$r	84-85	1	NT	NS
Home Econor	nics			1
fresh	84-85	1	1 1	NS.
Fresh	85-86	í	Ε	NS NS
Soph	84-85	ī	1	l NS
Soph	85-86	I	į E	NS
Jr	84-85	I	E	NS
J٢	85-86	1	E	NS
<b>\$</b> r	84-85	1	E	NS
Computer P	rogram			
Soph	85-86	ī	NT	NS
Jr	84-85	E	NT	NS
Jr	85-86	Ē	NT.	NS
Sr	84-85	Ē	NT	NS

<u>Hote</u>. NS = Not significant; ! = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept difference; found; NT = Not tested due to small sample sizes.

### Verbal High School Composite

#### English I - IV

Freshmen 1984-85. Using the Verbal high school composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 and the Model 2 vs Model 5 comparisons. However, the Model 2 vs Model 6 comparsion showed that these two models were not significantly different. Model 6 included the unit vector, the Verbal score by sex two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 6 as the best prediction equation for this sample's English grade, no differential validity was evidenced for the ethnicity by Verbal score two-way interaction variables, with ethnicity being defined as White, Black and Hispanic group membership.

Freshmen 1985-86. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .036 (p<.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Verbal composite as the predictor variable freshmen

females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using this ASVAB composite resulted in no statistically significant slope or intercept differences among the White, Black and Hispanic regression lines. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of English course grade for these freshmen.

Sophomores 1984-85. When the model comparisons were made for gender group differences, using the Verbal composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .010 (p $\leq$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Verbal composite was significantly different for this year's sophomore males and females.

Using the Verbal composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

<u>Sophomores 1985-86</u>. The model comparisons for gender group differences using the Verbal composite showed statistically significant slope differences between the male and femule regression lines, with Model 7 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .009 ( $\gamma \le .001$ ). Thus, the change in the English grade per unit change in the ASVAB Verbal composite was significantly different for these sophomore males and females.

Using the Verbal composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. Thus, Model 12 could be used in the prediction of English course grade for these sophomores.

Juniors 1984-85. When the model comparisons were made for gender group differences, using the Verbal high school composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .009 (p<.001), with Model 7 being the best prediction equation for this group's

English grade. Thus, the change in the English grade per unit change in the Verbal high school composite was significantly different for these junior males and females.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hispanic juniors. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of English course grade for these individuals.

Juniors 1985-86. As in the 1984-85 school year, using the Verbal composite in the equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .008 (p $\leq$ .001), with Model 7 being the best prediction equation for English grade. Thus, the change in the English grade per unit change in the Verbal composite was also significantly different for these junior males and females.

Again, using the Verbal composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White, Black and Hispanic individuals. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. The ASVAB Verbal composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $\mathbb{R}^2$  change of .029 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Verbal composite as the aptitude predictor variable senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic etnnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

### General Math

Freshmen 1984-85. This sample, using the Verbal high school composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, containing only the unit vector

and the Verbal composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, Which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Verbal composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  charge of .038 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, fodel 8 would be the best prediction system. Thus, if a cc.mmon regression line using the Verbal composite were used in the prediction of General Math course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Verbal composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the Verbal high school composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black othnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite as the aptitude predictor variable resulted statistically significant intercept differences for the gender group members. With an R2 change of .028 (r .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for this sample. Thus, if a common regression line using the Verbal composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Verbal composite score, could be used in predicting General Math course grade for these individuals.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

#### Algebra

Freshmen 1984-85. Using the ASVAB Verbal composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups with an  $\mathbb{R}^2$  change of .037 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

<u>Freshmen 1985-86</u>. With the Verbal composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in  $R^2$  change of .036 (p $\leq$ .001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the

unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Sophomores 1984-85. In this 1984-85 sample, using the Verbal high school composite score as the aptitude predictor variable, results showed statistically significant differences for the gender group members. These tests resulted in an  $R^2$  change of .023 (p $\leq$ .001) for the Model 8 vs Model 9 Therefore, Model 8 would be the best prediction comparison. equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

<u>Sophomores 1985-86</u>. In this sample, using the Verbal high school composite, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Nonwhite ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 sophomores.

Amniors 1984-85. In this 1984-85 sample, using the Verbal high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .028 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

<u>Juniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of Algebra course grade for these juniors.

At first, using this composite with this <u>Seniors 1984-85.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .034 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these seniors. Using this composite, senior females would consistently underpredicted in their Algebra grades if the common regression line were used, while senior males would consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12 could be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

#### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Model 9 or Model 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. As in the Freshmen sample, using the Verbal composite resulted in no statistically significant slope of intercept differences for the gender group or ethnic group members. Model 9 or Model 12 could be used in the prediction of Geometry course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Verbal composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .020 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Verbal composite within the equations, the results showed statistically significant slope differences between the White and Black regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .019 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB Verbal composite was significantly different for these White and Black sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Verbal composite as the aptitude measure, the results showed no statistically significant slope of intercept differences for the gender group or ethnic group members. Model 9 or Model 12 could be used in the prediction of Geometry course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in some of the other Geometry samples, using the Verbal composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Geometry course grade for these juniors.

When the model comparisons were made for ethnic group differences, using the Verbal composite, the results showed statistically significant intercept differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .105 (p<.01), with Model 11 being the best prediction equation for this sample's Geometry grade. Thus, using this composite, White juniors would

be consistently underpredicted in their Geometry grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Verbal composite equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of Geometry course grade for these seniors.

#### Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The Verbal composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

#### General Science

Freshmen 1984-85. Using the Verbal high school composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Verbal composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by Verbal score two-way interaction variables or the sex by Verbal score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or Model 12, which contained the unit vector and the Verbal composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

Sophomores 1984-85. In this 1984-85 sample, using the Verbal high school composite score as the aptitude predictor variable, the results showed statistically significant intercept

differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .038  $(p{\le}.001)$  for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the Verbal composite as the aptitude aptitude measure resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or Model 12 could be used in the prediction of General Science course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite within the prediction equation resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Science course grade for these juniors.

With the Verbal composite as the aptitude measure, the results showed statistically significant intercept differences for the two ethnic subgroups. With an  $\mathsf{R}^2$  change of .053 (p≤.01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for General Science course grade for these juniors. Using this composite, White juniors would be consistently underpredicted in their General Science grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This Verbal

composite prediction equation resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. As in some of the previous samples, Model 9 or Model 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the Verbal composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Verbal composite, could be used in the prediction of General Science course grade for these seniors.

#### Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This Verbal composite equation also resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

<u>Freshmen 1985-86.</u> The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $R^2$  change of .029 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Verbal composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

Sophomores 1984-85. Using the Verbal high school composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 and the Model 2 vs Model 5 comparisons. However, the Model 2 vs Model 6 comparsion showed that these two models were not significantly different. Model 6 included the unit vector, the Verbal score by sex two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 6 as the best

prediction equation for this sample's Biology grade, no differential validiy was evidenced for the ethnicity by Verbal score two-way interaction variables, with ethnicity being defined as White, Black and Hispanic group membership.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences between the gender group members and an  $R^2$  change of .058 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

<u>Juniors 1984-85</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .030 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Verbal composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. Using the Verbal composite as the predictor variable resulted in statistically significant intercept differences for the gender groups. With an  $\mathbb{R}^2$  change of .033 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Biology course grade for these juniors. Using this composite, junior females would be

consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Verbal composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group With  $R^2$  changes of .036 and .031 (p<.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these seniors. Using this composite, senior females would be consistently underpredicted in their Biology grades if the common regression while senior males would be consistently line were used, overpredicted if a common regression line were used. Conversely, if a common regression line using the Verbal composite as the aptitude measure were used in the prediction of Biology course grade, White schiors would be consistently underpredicted on this while Black seniors would be criterion consistently overpredicted.

# Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Verbal composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Verbal composite, could be used in the prediction of Chemistry course grades obtained by freshmen in this year.

Sophomores 1984-85. This sample tested only for gender group differences. Again, with the Verbal composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Chemistry course grades obtained by these sophomores.

This sample tested only for gender group Sophomores 1985-86. differences. Using the Verbal composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an Rc change of .043 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by The use of this including the gender variables in the equations. Verbal composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic With  $R^2$  changes of .040 and .021 (p $\leq$ .01) for the group members. Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons. and 11 would be the best prediction equations for these Models 8 junior Using this composite, females would consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used. if a common regression line using the Conversely, composite as the aptitude measure were used in the prediction of Chemistry course grade, White juniors would be consistently underpredicted on this criterion while Nonwhite juniors would be consistently overpredicted.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by rot including the gender variables in the equations. The use of this resulted composite in statistically significant differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .052 (p $\leq$ .01) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison, Using the Verbal composite prediction equation for this sample. as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior mates would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite, the results showed no statistically significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or Model 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

### Physics I - II

Juniors 1985-86. This sample tested only for gender group differences. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .032 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Verbal composite as the predictor variable, junior females would be consistently underpredicted in their Physics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. This sample tested only for gender group differences. The Verbal composite equations again resulted in statistically significant intercept differences for the gender groups. An  $\mathbb{R}^2$  change of .038 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Verbal composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if . common regression line were used.

# Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The Verbal composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Verbal composite, could be used in the prediction of Government course grades obtained by freshmen for this year.

Sophomore 1984-85. This sample also tested only for gender group differences. Again, using the Verbal composite as the predictor variable, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Government course grade for these sophomores.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this Verbal composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .031 and .018 (p $\leq$ .01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the

common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Verbal composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, the use of this Verbal composite in the equations resulted in statistically significant intercept differences for only the gender subgroup. With R<sup>2</sup> change of .017 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Juniors 1985-86. This sample, using the Verbal high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .025 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 was the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite ocore, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Seniors 1984-85. Similar to the previous samples, this sample, using the Verbal composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Again, Models 9 or 12,

which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

### history

Freshmen 1984-85. The use of the ASVAB Verbal composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .031 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Mcdel 12, which contained only the urit vector and the Verbal composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school vear.

Freshmen 1985-86. This sample, using the Verbal high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an R<sup>2</sup> change of .009 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the Verbal high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .020 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their

History grades if the common regression line were used, while sopnomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

Sophomores 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .032 (p<.061) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Verbal composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. With the  $R^2$  change for the Model 10 and Model 11 comparison approximating .008 (p $\leq$ .001), Model 10 would be the best prediction system for this sample. Thus, the change in History grade per unit change in the Verbal composite was significantly different for White, Black and Hispanic sophomores.

Juniors 1984-85. Like the 1985-86 freshmen sample, this sample, using the Verbal high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .029 (p≤.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal high school composite score as the aptitude predictor variable, results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .033 (p $\leq$ .01) for the Model 8 vs Model Therefore, Model 8 would be the best prediction 9 comparison. equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Verbal composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of History course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $R^2$  change of .026 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Verbal composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

# Foreign Language

<u>Freshmen 1984-85</u>. After collapsing across climic groups and then collapsing across gender groups, the use of the ASVAB Verbal composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. The results showed an  $R^2$  change of .054 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this

sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an R<sup>2</sup> change of .021 (p≤.01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Verbal composite within the equations, the results showed statistically significant slope differences between the male and female regression lines. The R2 change for the Model 7 and Model 8 comparison was approximately .008 (p<.01), with Model 7 being the best prediction equation for this sample's Foreign Language Thus, the change in the Foreign Language grade per unit change in the ASVAB Verbal composite was significantly different for male and female freshmen.

When the model comparisons were made for ethnic group differences, using the Verbal composite within the equations, the results also showed statistically significant slope differences between the White, Black and Hispanic regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .011 ( $p \le .01$ ), with Model 10 being the best prediction equation for this sample's Foreign Language grade. Thus, the change in the Foreign Language grade per unit change in the ASVAB Verbal composite was significantly different for these White, black and Hispanic freshmen.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the white, Flack and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Verbal prediction equations showed statistically significant intercept differences between the male and female regression lines. The R change for the Mode's and Model 9 comparison was approximately .080 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade.

Thus, using this composite as the aptitude measure, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the use of this Verbal composite in the prediction equations also resulted in statistically significant intercept differences for the ethnic group members. With an R2 change of .010 ( $p \le .01$ ) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system for these sophomores' Foreign Again, using this composite as the Language course grade. White and Hispanic sophomores would be aptitude measure, consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Using the ASVAB Verbal composite as the Sophomores 1985-86. predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an R<sup>d</sup> change of .053 (p≤.01) for the Model 8 vs Model 9 comparison. Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used,

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Verbal composite as a predictor measure statistically significant intercept differences between the male and female regression lines. The  $\mathbb{R}^2$  change (p $\leq$ .01) for the Model 8 and Model 9 comparison was approximately .069, with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would or consistently underpredicted in their Foreign Language grades if the common regionalize it were used while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the Verbal predictor composite also resulted in statistically significant intercept differences for the ethnic group members. The  $R^2$  change for the Model 11 vs Model 12 comparison was .022 (p $\leq$ .01); therefore, Model 11 would be the best prediction equation for these juniors' Foreign Language course grade. Using this composite White and Hispanic juniors would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not The Verbal including the gender variables in the equations. prediction equations resulted in statistically significant intercept differences between the male and female respression The R2 change for the Model 8 and Model 9 comparison was (p≤.01), with Model 8 being the best approximately .038 prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Verbal composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or Mcdel 12 could be used in the prediction of Foreign Language course grade for these individuals.

### Secretary and Office Education

Juniors 1985-86. This sample tested only for White and National Train differences. Using the Verbal composite as the aptitude predictor variable, the results similar statistically significant slope or intercept differences for the

ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Verbal composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested only for White and Nonwhite ethnic group differences. Again, using the Verbal composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Verbal composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

At first, using this composite with this Freshmen 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Verbal prediction equations resulted in statistically significant intercept differences between the male and female regression The  $R^2$  change for the Model 8 and Model 9 comparison was .011  $(p\leq .01)$ , with Model 8 being approximately the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAR composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied including the gender variables in the equations. The Verbal significant prediction equations resulted in statistically intercept differences between the male and female regression The R' change for the Model 8 and Model 9 comparison was approximately | .025  $(p\leq .01)$ , with Model 8 being the prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently recognition in a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12. Which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. intercept. The R2 results again showed statistically significant differences between the male and female regression lines. change for the Model 8 and Model 9 comparison was approximately .038 (p≤.01), with Model 8 being the best prediction equation for sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently over redicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .064 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in

their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .039 (p<.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, hodel 12, which contained only the unit vector and the Verbal composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Verbal composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .026 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB Verbal composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender group, and resulted in an  $\mathbb{R}^2$  change of .046 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be

the best prediction equation for this sample. Using this composite as the predictor variable, E-phomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. This sample tested for gender Again, using the Verbal composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .085 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the junior females variable, predictor would be consistently underpredicted in their Accounting grades if junior regression line were while males would used, consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested ior gender group differences. As in the previous sample, using the Verbal composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .034  $(p \le .01)$  for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1934-85. Like the junior sample, this sample tested gender group differences. Using the Verbal composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .043  $(1 \le .01)$  for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Verbal composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .046 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model

8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Verbal composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An R² change of .072 (p≤.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Verbal composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an  $R^2$  change of .066 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Verbal composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomore 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Verbal composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R<sup>2</sup> change of .058 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted ASVAB Verbal composite, the results statistically significant intercept differences in the prediction equations for the two ethnic groups. An R<sup>2</sup> change of .034 (p≤.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics Using this predictor course grade for these sophomores. composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were consistently while Nonwhite sophomores would be overpredicted if a common regression line were used.

Sophomores 1935-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Verbal composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an R<sup>2</sup> change of .064 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Verbal composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied including the gender variables in the equations. The use of the Verbal composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $\mathbb{R}^2$  change of .028 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Verbal composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could

be used in the prediction of Home Economics course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the Verbal composite equations, resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .103 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Verbal composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Verbal composite equations resulted in statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .038 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Verbal composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

## Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Verbal composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An R<sup>2</sup> change of .077

 $(p\leq .01)$  was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample tested only for gender group differences. Again, the Verbal composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Verbal composite, could be used in the prediction of Computer Programming course grades obtained by juniors for this year.

Collapsing across the ethnic groups, the Juniors 1985-86. model comparisons tested for gender group differences. Using the Verbal predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .100 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. junior consistently composite females would be underpredicted in their Computer Programming grades if the common regression line were used, while junior males would consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample tested for gender group differences. The Verbal composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Verbal composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 6.</u> Summary of Equity Findings for Prediction of High School Course Grades by Verbal High School Composite

Course		Sex	Ethnicity	SexmEthnicity
English I-	IV			
Fresh	84 - 85	S	NS	1
Fresh	85-86	1	E	NS
Soph	84-85	\$	E	NS
Soph	85-86	5	E	NS
Jr <sup>'</sup>	84-85	S	E	NS
٦r	85-86	S	E	! NS
Sr	84-85	1	E	NS

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 6. (Continued)

Course		Sex.	Ethnicity	Sex*Ethnicity
General Hat	*		+	1
Fresh	84 - 85	E	i E	NS
Soph	84-85	Ē	Ĕ	WS
Soph	85-86	ī	Ě	NS
Jr.	84-85	Ė	E	NS
Jr	85-86	ī	Ē	NS
\$r	84-85	Ė	E	NS
Algebra		<del></del>		
Fresh	84-85	1	E	MC
Fresh	85-86	1	E	NS
Soph	84-85	1	E	NS.
Soph	85-86	E	Ε	MS
3r	84-85	I	E	MS
Jr	85-86	E	£	NS
\$r	84-85	1	E	NS
Geometry				
Fresh	85-86	Ē	E	NS.
Soph	84 - 85	E	E	38
Sooh	85-86	1	\$	MS
٦r	84-85	E	E	NS
Jr	35-86	E	1 1	2M
Sr	84 - 85	<u> </u>	£	NS
Calculus		_	1	İ
٦r	85-86	E	NT	NS
General Sc	ience		<del>- †</del>	<del> </del>
Fresh	84-85	NE	NS	1
Fresh	85-86	Ë	E	N1
Soph	84 - 85	ĭ	Ē	NS:
Soph	85-86	Ė	Ē	MG
1r	84-85	Ē	l ī	NS
Jr	85-86	Ē	Ė	107,
\$r	84 - 85	Ē	ŇT	NS
Biology				
Fresh	84-85	E	E	NS
Fresh	83-86	1	E	NS
Soph	84-85	\$	NS	1
Soph	85-86	1	E	NS
Jr	84-85	1	E	NS
16	85-86	1	NT	NS
\$r	84-85	1	1	NS
Chemistry				
Fresh	85-86	E	NT	PS PS
Soph	84-85	E	NT	NS
Soph	85-86	i	NT	HS
Jr	84-85	1	1	NS
Ĵr	85-86	ì	E	NS
Sr	84-85	Ē	Ē	HS
Physics				
٦L	85·86 S	1	NT	NS
	84 · 85			

Note. NS = Not significant; 1 = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 6. (Concluded)

Course		Sex	Ethnicity	Sex*Ethnicity
Government		<del></del>		
Fresh	84-85	E	NT	NS
Soph	84-85	Ē	NT	NS
Soph	85-86	ī	i	#8
16	84-85	i	Ē	MS
J۲	85-86	1	Ē	HS
\$r	84-85	E	Ē	NS
History				
Fresh	84-85	I	E	NS
Fresh	85-86	I	E	NS
8oph	84-85	ī	E	MS
\$ooh	85-86	1	\$	NS
J۲	84-85	1	E	NS
Ĵr	65-86	i	E	MS
Sr	84-85	Ė	ī	HS
Foreign Lar	19U698			Ì
Fresh	84-85	1	1 1	MS
Fresh	85-86	Š	S	NS
Soph	84-85	1	i	NS
Soph	85-86	i	E	KS
Jr	84-85	i	i	NS
Jr.	85-86	i	E	NS
\$r	84-85	Ē	E	NS
Secretary I	Ofc	·	1	
15	85-86	NT	E	NS
Sr	84-85	ĦŢ	E	KS
		· <del></del>		<del> </del>
typing .	ł			
Fresh	84 - 85	1	E	NS
Fresh	85-86	1	E	2K
Soph	84-85	I	E	) NS
Soph	85-86	E	E	MS
Jr	84-85	ľ	E	NS NS
Jr	85-86	i	E	MS
\$r	84 - 85	ì	NT	MS
Accounting				
Soph	85-86	1	NT	NS
Jr	84-85	I	NT	HS
Jr	85-86	1	NT	NS
\$r	84-85	1	MT	HS
Home Econor	Mics			
	84-85	ī	1	MS
Fresh	85-86	1	E	MS
Soph	84-85	1	1 1	NS
Soph	85-86	i	E	NS
Jr	84 - 85	i	E	NS
Jr	85-86	i	E	NS
Sr.	84-85	i	E	HS
Computer "	rogram			<del> </del>
Soph	85-86	1	NT	NS
		Ė	NT	NS
Jr	04-02	E	, NI	, 2
7 7	84-85 85-86	i	NT	NS NS

<u>Mote</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

# Math High School Composite

### English I - IV

Freshmen 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .032 (p<.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of English course grade for these freshmen.

Freshmen 1985-86. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using this ASVAB composite resulted in no statistically significant slope or intercept differences among the White, Black and Hispanic regression lines. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of English course grade for these freshmen.

<u>Sophomores 1984-85</u>. When the model comparisons were made for gender group differences, using the Math composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .004 (p $\le$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Math composite was significantly different for this year's sophomore males and females.

Using the Math composite score and the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and History sophomores which were the ethnic groups defined in the production equations. Thus, Model 12, which contained only the paid vector and the Math composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

Sophomores 1985-86. The model comparisons for gender group differences using the Math composite showed statistically significant intercept differences between the male and female regression lines, with Mcdel 8 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .004 (p $\le$ .001). Thus, using the Math composite as the predictor variable sophomore females would be consistently underpredicted in their English grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Math composite score as the aptitude measure also resulted in statistically significant intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .014 (p $\leq$ .001), with Model 11 being the best prediction equation for this sample. Thus, using the Math composite as the predictor variable White and Hispanic sophomores would be consistently underpredicted in their English grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. When the model comparisons were made for gender group differences using the Math high school composite, the results showed statistically significant intercept differences between the male and female regression lines, with Model 8 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .004 (p<.001). Thus, using the Math composite as the predictor variable junior females would be consistently underpredicted in their English grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hispanic juniors. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of English course grade for these individuals.

<u>Juniors 1985-86</u>. As in the 1984-85 school year, using the Math composite in the equations showed statistically significant intercept differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 8 and Model 9 comparison was

approximately .008 (p $\leq$ .001), with Model 8 being the best prediction equation for English grade. Again, using the Math composite as the predictor variable junior females would be consistently underpredicted in their English grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, using the Math composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White, Black and Hispanic individuals. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. The ASVAB Math composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $\mathbb{R}^2$  change of .030 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the aptitude predictor variable senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

### General Math

Freshmen 1984-85. This sample, using the Math high school composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, containing only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Freshmen 1985-86. For this sample, the results also showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Again, Models 9 or 12, containing only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic

group members. Models 9 or 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Math composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $\mathbb{R}^2$  change of .034 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Math composite were used in the prediction of General Math course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Math composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the Math high school composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Models 9 or 12, containing the unit vector and the Math composite score, could be used in predicting General Math course grade for these individuals.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

# Algebra

Freshmen 1984-85. Using the ASVAB Math composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups with an  $R^2$  change of .041 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this simple were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Freshmen 1985-86. With the Math composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in  $R^2$  change of .037 (p $\leq$ .001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

In this 1984-05 sample, using the Math Sophomores 1984-85. high school composite score as the aptitude predictor variable, statistically significant results showed differences for the gender group members. These tests resulted in an  $R^2$  change of .023 (p<.001) for the Model 8 vs Model 9 Therefore, Model 8 would be the best prediction comparison. equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

<u>Sophomores 1985-86</u>. In this sample, using the Math high school composite, the results also showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .016 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Math composite as the predictor resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

Juniors 1984-85. In this 1984-85 sample, using the Math high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .035 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of Algebra course grade for these juniors.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite in the equations resulted in statistically significant intercept differences for the gender group members. With an R2 change of .034 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these seniors. this composite, senior females would be consistently underpredicted in their Algebra grades if the common regression while senior males would be consistently line were used, overpredicted if a common regression line were used.

Using this AFVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12 could be used in the prediction of Algebra course grades obtained by senjors in the 1984-85 school year.

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### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Model 9 or 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .011 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the Math composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores. Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Math composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .018 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Math composite within the equations, the results showed statistically significant intercept differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .022 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Geometry grade. Thus, White sophomores would be consistently underpredicted in their Geometry grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Math as the aptitude composite measure, the results statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .018 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these juniors. Using this composite, junior females would be consistently underpredicted in their Geometry grades if the common regression line were used, while junior males would be consistently overpredicted if a common ragressio line were used.

When the tests were conducted for ethnic group differences using the Math predictor composite, the results showed no statistically significant slope of intercept differences for the ethnic group members. Model 12 could be used in the prediction of Geometry course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in some of the other Geometry samples, using the Math composite in the

prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Geometry course grade for these juniors.

When the model comparisons were made for ethnic group differences, using the Math composite, the results showed statistically significant intercept differences between the White and Nonwhite regression lines. The R $^{+}$  change for the Model 10 and Model 11 comparison was approximately .069 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in Geometry grade per unit change in the Math composite was significantly different for White and Nonwhite juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Math composite equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of Geometry course grades for these seniors.

### Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The Math composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grades for these individuals.

### General Science

Treshmen 1984-85. Using the Math high school composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Math composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by Math score two-way interaction variables or the sex by Math score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite as the aptitude predictor variable resulted in no statistically significant intercept differences for the gender group members. Model 9, which contained the unit vector and the Math composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

When the model comparisons were made for ethnic group differences, using the Math composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .031 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's General Science grade. Thus, the change in General Science grade per unit change in the Math composite was significantly different for White and Black freshmen.

In this 1984-85 sample, using the Math Sophomores 1984-85. high school composite score as the aptitude predictor variable, results showed statistically significant differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .035 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the Math composite as the aptitude aptitude measure resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of General Science course grade for these sophomores.

When the model comparisons were made for ethnic group differences, using the Math composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .044 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's General

Science grade. Thus, using this composite, White sophomores would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite within the prediction equation resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Science course grade for these juniors.

With the Math composite as the aptitude measure, the results showed statistically significant intercept differences for the two ethnic subgroups. With an  $R^2$  change of .071 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for General Science course grade for these juniors. Using this composite, White juniors would be consistently underpredicted in their General Science grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This Math composite prediction equation resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Model 9 or 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the Math composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of General Science course grade for these seniors.

## Biology I - II

<u>Freshmen 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This Math composite equation also resulted in no statistically significant

slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

Freshmen 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .028 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

Sophomores 1984-85. The use of this composite with this sample also resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $R^2$  change of .018 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the Math composite as the predictor composite, the results showed statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups, with an  $\mathbb{R}^2$  change of .008 (p $\leq$ .001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, Black and Hispanic sophomores would be consistently underpredicted in their Biology grades if the common regression line were used, while White sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences between the gender group members and an  $\mathbb{R}^2$  change of .044 ( $p \le .01$ )

for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $\mathbb{R}^2$  change of .033 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. Using the Math composite as the predictor variable resulted in statistically significant slope differences for the gender groups. With an  $R^2$  change of .031 (p $\leq$ .01) for the Model 7 vs Model 8 comparison, Model 7 would be the best prediction equation of Biology course grade for these juniors. Thus, the change in the Biology grade per unit change in the Math high school composite was significantly different for male and female freshmen.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Math composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With R2 changes of .024 and .066 (p $\leq$ .01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these seniors. Using this composite, senior females would be consistently

underpredicted in their Biology grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Math composite as the aptitude measure were used in the prediction of Biology course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

### Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Math composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of Chemistry course grades obtained by freshmen in this year.

Sophomores 1984-85. This sample tested only for gender group differences. Again, with the Math composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Chemistry course grades obtained by these sophomores.

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. Using the Math composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an  $\mathbb{R}^2$  change of .044 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using 11 s composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Math composite in the equations resulted in statistically significant intercept differences for the gender group members. With  $R^2$  change of .048 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for

White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .074 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results again showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite, the results showed no statistically significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

#### Physics I - II

Juniors 1985-86. This sample tested only for gender group differences. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .041 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, junior females would be consistently underpredicted in their Physics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. This sample tested only for gender group differences. The Math composite equations again resulted in statistically significant intercept differences for the gender groups. An  $\mathbb{R}^2$  change of .037 (p≤.01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

## Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The Math composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of Government course grades obtained by freshmen for this year.

Sophomore 1984-85. This sample also tested only for gender group differences. Using the Math composite as the predictor variable, the results showed statistically significant intercept differences for the gender groups. An  $R^2$  change of .038 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this Math composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With R2 changes of .028 and .021 (p<.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Math composite as the aptitude measure were used in the prediction of Government White sophomores would be underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, the use of this Math composite in the equations resulted in statistically significant intercept differences for only the gender subgroup. With  $R^2$  change of .020 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Juniors 1985-86. This sample, using the Math high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .030 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 was the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Seniors 1984-85. Similar to the previous samples, this sample, using the Math composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Again, Models 9 or 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

# History

Freshmen 1984-85. The use of the ASVAB Math composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .031 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the Math high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .008 (p<.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the Math high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .015 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

Sophomores 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $\mathbb{R}^2$  change of .032 (p $\leq$ .001) for the Model & vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Math composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .008 (p $\leq$ .001), with Model 10 being the best prediction equation for this sample. Thus, the change in History grade per unit change in the Math composite was significantly different for White, Black and Hispanic sophomores.

Juniors 1984-85. Like the 1985-86 freshmen sample, this sample, using the Math high school composite score as the aptitude predictor variable, resulted in significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .031  $(p \le .001)$  for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in statistically significant intercept differences for the White and Black ethnic group members. An  $R^2$  change of .009 (p $\leq$ .001) for the Model 11 vs Model 12 comparison was evidenced. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the predictor variable, White juniors would be consistently underpredicted in their History grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Math high school composite score as the aptitude predictor variable, the results showed statistically significant slope differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .018 ( $p \le .01$ ) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. Thus, the change in the History grade per unit change in the Math high school composite was significantly different for freshmen males and females.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Math composite the prediction equations resulted in in statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of History course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $\mathbb{R}^2$  change of .030 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Math composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

### Foreign Language

Freshmen 1984-85. After collapsing across ethnic groups and then collapsing across gender groups, the use of the ASVAB Math composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. The results showed an  $R^2$  change of .052 ( $\mu \le .01$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their

Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $\mathbb{R}^2$  change of .013 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Math composite within the equations, the results showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .043 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Math composite within the equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Math prediction equations showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .079 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this composite

as the aptitude measure, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the use of this Math composite in the prediction equations also resulted in statistically significant intercept differences for the ethnic group members. With an  $R^2$  change of .009 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system for these sophomores' Foreign Language course grade. Again, using this composite as the aptitude measure, White and Hispanic sophomores would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. Using the ASVAB Math composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .062 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophonore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of the Math composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .082 (p<.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the Math predictor composite resulted in no statistically significant slope or intercept differences for the ethnic group members. Model 12 could be used in the previous of Foreign Language course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Math prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .048 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hislanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Foleign Language course grades obtained by juniors during this school year.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Math composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Models 9 or 12 could be used in the prediction of Foreign Language course grade for these individuals.

## Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite ethnic group differences. Using the Math composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample also tested only for White and Nonwhite ethnic group differences. Again, using the Math composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Math prediction equations resulted in statistically significant intercept differences between the male and female regression The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .013 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Math prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .029 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained

only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. showed statistically results again significant intercept differences between the male and female regression lines. The R change for the Model 8 and Model 9 comparison was approximately .042 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for athnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1934-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .063 (p<.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the hath composite score in the prediction equation, could be used in the prediction of Typing course grades of aired by junious during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences with inventigated by not including ethnicity variables in the partition equations. Then, the White and Nonwhite ethnic grap farences were tudied by not including the gender variables in the equations. As in the previous sample, the results that the equations. As in the previous sample, the results that walk with intercept differences between the walk with few a regression lines. The  $R^2$  change for the widel 8 and Model 4 amparison was approximately .036 (p<.01), with widel 8 being the best prediction equation for this sample is Thing wade. Thus, using this predictor composite, juntor females would be consistently underpredicted in their Typic grades if the common regression line were used, while junior wales would be consistently overpredicted if a common regression line were used.

Again, when testing for a nnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Math composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

<u>Seniors 1934-85</u>. This sample tested only for gender group differences. The Math composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .033 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

## Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB Math composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .049 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be

consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

This sample tested <u>Juniors 1984-85.</u> for gender group differences. Again, using the Math composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $\mathbb{R}^2$  change of .093 (p<.01) for the Model Therefore, Model 8 would be the best 8 vs Model 9 comparison. prediction equation for this sample. Using this composite as the predictor variable, junior be females would consistently underpredicted in their Accounting grades if the while junior males would regression line were used, consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested for gender group differences. As in the previous sample, using the Math composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .038 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85.</u> Like the junior sample, this sample tested only for gender group differences. Using the Math composite equations, the results prediction **showed** statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change of .037 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Home Economics

<u>Freshmen 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Math composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .047 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently

underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Math composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $R^2$  change of .074 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Math composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an R2 change of .060 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Math composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomore 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Math composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R<sup>2</sup> change of .052 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Math composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $R^2$  change of .040 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Math composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $\mathbb{R}^2$  change of .057 (p $\leq$ .01) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison. prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Math composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Math composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $\mathbb{R}^2$  change of .028 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Math composite, the results showed no statistically significant slope or intercept differences in the

prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this using the Math composite equations, resulted in statistically significant intercept differences for the gender group members. An R2 change of .113 (p<.01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Math composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Math composite equations resulted in statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .043 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Math composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

## Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Math composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An R<sup>2</sup> change of .069

(p≤.01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample tested for gender group differences. Again, the Math composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of Computer Programming course grades obtained by juniors for this year.

Collapsing across the ethnic groups, the Juniors 1985-86. model comparisons tested for gender group differences. Using the Math predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R<sup>2</sup> change of .105  $(p \le .01)$  for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using junior females would composite be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample tested for gender group differences. The Math composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 7.</u> Summary of Equity Findings for Prediction of High School Course Grades by Math High School Composite

Course		Sex	Ethnicity	Sex*Ethnicity	
English I-	ıv				
Fresh	84-85	1	E	NS	
Fresh	85-86	1	E	NS	
Soph	84 - 85	S	E	NS	
Soph	85-86	ı	! !	NS	
Jr <sup>*</sup>	84-85	1	E	NS	
٦٢	85-86	1	Ε	NS	
Sr	84-85	1	E	NS NS	

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 7. (Continued)

Course	1	Sex	Ethnicity	Sex*Ethnicity		
General Mat				1		
Fresh	84-85	E	E	NS		
Fresh	85-86	Ē	Ě	NS		
Soph	84-85	Ē	È	NS		
Soph	85-86	ī	Ē	NS		
Jr Sopai	84-85	έ	E	NS		
	85-86	Ē	E	NS		
8L 7L	84-85	E	Ē	NS		
Algebra						
Fresh	84-85	1	E	NS		
Fresh	85-86	i	Ė	NS		
Soph			Ě	NS		
Soph			ŧ	NS		
1L	84-85	i	E	NS.		
1L 1L	85-86	É	E	NS		
-	84-85	Ī	E	NS		
\$r	04-03	<u> </u>		H		
Geometry	85-86	E	_	ue.		
Fresh		E į	E	NS NS		
Soph	84-85		E	NS NS		
Soph	85-86	1	1	NS		
ήL	84-85	1	E	NS		
٦r	85-86	E	s	NS		
\$r	84-85	E	E	NS		
Calculus						
٦r	85-86	E	MT	NS		
General Sc	ience					
Fresh	84-85	NS	NS	ı		
fresh	85-86	E	S	NS		
Soph	84 - 85	1	Ε	NS		
Soph	85-86	E	ı	NS		
Jr.	84-85	E	1	MS		
٦̈٢	85-86	Ē	E	NS		
\$r	84-85	Ē	NT	NS		
Biology						
Fresh	84-85	E	E	NS		
Fresh	85-86	I	E	NS		
Soph	84-85	ī	ī	NS		
Soph	85-86	1	E	NS		
14	84-85	i	Ē	HS		
Jr	85-86	Š	NT	NS		
Sr.	84-85	ĭ	î	NS		
Chemistry			1	<u> </u>		
Fresh	85-86	E	NT	NS		
Soph	84-85	Ē	NT	NS		
Soph	85-86	ī	NT	NS		
	84-85			NS		
٦٢		į	E			
Jr \$r	85 - 86 84 - 85	l E	E	HS NS		
	34-07	<u> </u>				
Physics	85-86	1		Ne.		
۶. ۱۲		1	NT MT	NS NS		
\$r	84 - 85		TH I	M3		

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

<u>Table 7.</u> (Concluded)

[48/4-17] (constant)				
Course		ν <b>ν</b>	Ethnicity	Sex*Ethnicity
 	<del></del>	<del></del>	<del> </del>	<del> </del>
 Government		-		ue.
Fresh	84-85	Ę	NT	NS
Soph	84-85	1	NT	MS
Soph	85-86	1	1	NS
Jr.	84-85	1	Ε	NS
16	85-86	1	E	NS
år	84-85	E	E	NS
History				
Fresh	84-85	I	E	NS
Fresh	85-86	i	E	NS
Soph	84-85	i	E	NS
Soph	85-86	i	s	NS
		-	i	NS
j.	84-85	I	1 1	
Jr Jr	85-86	S	E	NS
\$r	84-85	E	1	NS
Foreign Lar				
Fresh	84-85	1	ı	NS
Fresh	85-86	1	Ε	NS
Soph	84-85	ī	ī	NS
Soph	85-86	i	E	NS
Jr	84-85	i	Ē	NS
J۳	85 - 86	I	E	NS
\$r	84 - 85	E	Ε	NS
Secretary 8	Ofc			
10	85-86	NT	E	NS
\$r	84-85	NT	E	NS
Typing				
Fresh	84 - 85	1	E	NS
Fresh	85-86	i		NS
Soph	84 - 85	<u> 1</u>	E E E	NS
Soph	85-86	E	į į	MS
7t	84-85	1	E	NS
Jr	85-86	t	E	NS
\$r	84 - 85	1	×T	NS
Accounting				
Soph	85-86	1	NT	NS
Jr	84 - 85		NT	NS
ıt.	85-86	ī	NT	NS
\$r	84-85	i	NT	NS
Home Econor	mics.		1	
Fresh	84-85			NS
		1	1	
Fresh	85-86	1	E	NS
Soph	84 - 85	1	<u>t</u>	NS
Soph	85-86	1	E	NS
Jr	84 - 85	1	E	NS
	9E - 94	1	E	NS
Jr.	85-86			NS
	84 - 85	1	E	M3
Jr Sr	84-85	1		#3
Jr Sr Computer P	84-85 rogram			<del>                                     </del>
Jr Sr Computer P Soph	84-85 rogram 85-86	Į.	NT	NS
Jr \$r Computer P Soph Jr	84-85 rogram 85-86 84-85	I E	NT NT	NS NS
Jr Sr Computer P Soph	84-85 rogram 85-86	Į.	NT	NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

## Mechanical and Crafts High School Composite

#### English I - IV

<u>Freshmen 1984-85</u>. When the model comparisons were made for gender group differences, using the Mechanical high school composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\leq$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Mechanical composite was significantly different for this year's freshmen males and females.

Using the Mechanical composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic freshmen which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of English course grade for these freshmen.

<u>Freshmen 1985-86</u>. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White, Black and Hispanic regression lines. With an  $R^2$  change of .009 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable White freshmen would be consistently underpredicted in their English grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used. The Hispanic freshmen regression line appeared to be at an equal distance between the White and Black regression lines.

<u>Sophomores 1984-85</u>. When the model comparisons were made for gender group differences, using the Mechanical composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .015 (p $\le$ .001), with Model 7

being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Mechanical composite was significantly different for this year's sophomore males and females.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White, Black and Hispanic regression lines. With an  $\mathbb{R}^2$  change of .008 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable White and Hispanic freshmen would be consistently underpredicted in their English grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. When the model comparisons were made for gender group differences, using the Mechanical composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .012 (p $\le$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Mechanical composite was significantly different for this year's sophomore males and females.

Using the Mechanical composite score as the aptitude measure also resulted in statistically significant intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .022 (p $\leq$ .001), with Model 11 being the best prediction equation for this sample. Thus, using the Mechanical composite as the predictor variable White and Hispanic sophomores would be consistently underpredicted in their English grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. When the model comparisons were made for gender group differences, using the Mechanical composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .013 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Mechanical composite was significantly different for these junior males and females.

Using the Mechanical composite score as the aptitude measure also resulted in statistically significant intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .011

(p≤.001), with Model 11 being the best prediction equation for this sample. Thus, using the Mechanical composite as the predictor variable White and Hispanic juniors would be consistently underpredicted in their English grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. As in the 1984-85 school year, using the Mechanical ccmp site in the equations resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .014 (p $\le$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Mechanical composite was significantly different for these junior males and females.

Using the Mechanical composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. The ASVAB Mechanical composite as the aptitude predictor showed scatistically significant slope differences in the prediction equations for the two senior gender groups and resulted in an  $R^2$  change of .009 (p $\leq$ .001) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the English grade per unit change in the ASVAB Mechanical composite was significantly different for these senior males and females.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or interce t differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

#### General Math

Freshmen 1984-85. This sample, using the Mechanical high school composite score as the aptitude predictor variable, showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .021 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable freshmen females would be consistently underpredicted in their General Math grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Model 12, containing only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Freshmen 1985-86. For this sample, the results also showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Models 9 or 12, containing only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Mechanical composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .059 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Mechanical composite were used in the prediction of General Math course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Mechanical composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the Mechanical high school composite score as the aptitude predictor variable, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .044 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Mechanical composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently everpredicted.

When the ethnic group differences were investigated using this composite, the results showed no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Mechanical high school composite score as the aptitude predictor variable, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .061 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Mechanical composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently overpredicted.

Using the Mechanical composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12, containing the unit vector and the Mechanical composite score, could be used in predicting General Math course grade for these individuals.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Models 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

#### Aluebra

Freshmen 1984-85. Using the ASVAB Mechanical composite as the predictor variable, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .074 (p $\leq$ .0C1) for the Model 8 and Model 9 comparison, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if a common regression line were used while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

<u>Freshmen 1985-86</u>. With the Mechanical composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in  $\mathbb{R}^2$  changes of .083 (p $\leq$ .001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

<u>Sophomores 1984-85</u>. In this 1984-85 sample, using the Mechanical high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .023 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

Sophomores 1985-86. In this nample, using the Mechanical high school composite, the results also showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .042 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their

Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Mechanical composite as the predictor resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

Juniors 1984-85. In this 1984-85 sample, using the Mechanical high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .062 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the ASVAB Mechanical composite as the predictor variable, the results showed statistically significant slope differences in the prediction equations for the two gender groups with an  $R^2$  change of .024 (p<.01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the Algebra grade per unit change in the ASVAB Mechanical composite was significantly different for these junior males and females.

Using the Mechanical composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the two ethnic groups. Model 12 could be used in the prediction of Algebra course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Mechanical composite in the equations resulted in statistically significant slope differences for the gender group members. With an  $R^2$  change of .024 (p $\leq$ .01) for the Model 7 vs Model 8 comparison, Model 7 would be the best prediction system for these seniors. Using the ASVAB Mechanical composite as the predictor variable, the results showed statistically significant slope differences in the prediction equations for the two gender groups with an  $\mathbb{R}^2$  change of .007 (p $\leq$ .01) for the Model 7 vs Model 8 Therefore, Model 7 would be the best prediction comparison. equation for this sample. The change in the Algebra grade per unit change in the ASVAB Mechanical composite was significantly different for these senior males and females.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12 could be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted in an  $R^2$  change of .033 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Geometry grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the Mechanical composite in the prediction equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Mechanical composite in the equations resulted in statistically significant intercept differences fo the gender

groups. With an  $\mathbb{R}^2$  change of .056 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the Mechanical composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Mechanical aptitude measure, composite as the the results statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .079 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. sophomore females would composite, be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Mechanical composite within the equations, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .027 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Geometry grade. Thus, White sophomores would be consistently underpredicted in their Geometry grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Mechanical composite as the aptitude measure, the results showed statistically significant slope differences for the gender group members. With an  $R^2$  change of .019 (p<.01) for the Model 7 vs Model 8 comparison, Model 7 would be the best prediction equation for Geometry course grade for these juniors. The change in the Algebra grade per unit change in the ASVAB Mechanical composite was significantly different for these junior males and females.

When the tests were conducted for ethnic group differences using the Mechanical predictor composite, the results showed no statistically significant slope of intercept differences for the ethnic group members. Model 12 could be used in the prediction of Geometry course grade for these juniors.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Mechanical composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .069 (p $\le$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. composite, junior females would be consistently underpredicted in their Geometry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Mechanical composite, the results showed statistically significant intercept differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .078 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Geometry grade. Thus, using this composite, White juniors would be consistently underpredicted in their Geometry grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Mechanical composite equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

### General Science

Freshmen 1984-85. Using the Mechanical high school composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Mechanical composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evid need for the ethnicity by Mechanical score two-way interaction variables or the sex by Mechanical score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Mechanical composite as the aptitude measure, the results statistically significant intercept differences for the gender group members. With an  $R^2$  change of .026 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for General Science course grade for these freshmen. Using this composite, freshmen females would be consistently underpredicted in their General Science grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the Mechanical composite as the aptitude predictor variable resulted in no statistically significant intercept differences for the ethnic group members. Model 12, which contained the unit vector and the Mechanical composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

Sophomores 1984-85. In this 1984-85 sample, using the Mechanical high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .079 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Mcchanical composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores during this school year.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the Mechanical composite as the aptitude aptitude measure resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .057 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's General Science grade. Thus, using this composite, sophomore females

would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Mechanical composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .040 (p $\le$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White sophomores would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, using the Mechanical composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .042 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's General Science grade. Thus, using this composite, junior females would be consistently underpredicted in their General Science grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

This Mechanical composite prediction equation resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

Seniors 1984-85. This sample tested only for gender group differences. Using the Mechanical composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .044 (p $\le$ .01), with Model 8 being the best prediction equation for this sample's General Science grade. Thus senior females would be consistently underpredicted in their General Science grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Mechanical composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .061 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Biology grade. Thus, using this composite, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

This Mechanical composite equation also resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

Freshmen 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .060 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

<u>Sophomores 1984-85</u>. The use of this composite with this sample resulted in statistically significant slope differences in the prediction equations for the two freshmen gender groups, with an  $R^2$  change of .010 (p $\leq$ .001) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the Biology grade per unit change in the ASVAB Mechanical composite was significantly different for these sophomore males and females.

When the tests for ethnic group differences were conducted using the Mechanical composite as the predictor composite, the results showed no statistically significant slope or intercept

differences in the prediction equations for the White, Black and Hispanic ethnic groups. Thus, Model 12 could be used in the prediction of Biology grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences between the gender group members and an  $R^2$  change of .101 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $\mathbb{R}^2$  change of .079 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

Juniors 1985-86. This sample tested only for gender group differences. Using the Mechanical composite as the predictor variable resulted in statistically significant intercept differences for the gender groups. With an  $R^2$  change of .127 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Biology course grade for these juniors. Using the Mechanical composite as the predictor variable, junior females would be consistently underpredicted in

their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Mechanical composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With R2 changes of .093 and .063 ( $p \le .01$ ) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these Using this composite, senior females would consistently underpredicted in their Biology grades if the common regression line were used, while senior males consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Mechanical composite as the aptitude measure were used in the prediction of Biology course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

## Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Mechanical composite in the equations, the results showed statistically significant intercept differences for the gender groups. With an  $R^2$  change of .060 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Chemistry course grade for these freshmen. Using the Mechanical composite as the predictor variable, freshmen females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. This sample also tested only for gender group differences. Again, with the Mechanical composite in the equations, the results showed statistically significant intercept differences for the gender groups. With an  $R^2$  change of .065 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 could be used in the prediction of Chemistry course grades obtained by these sophomores. Sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. This sample tested only for gender group differences. Using the Mechanical composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an R<sup>2</sup> change

of .073 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Mechanical composite in the equations resulted in statistically significant intercept differences for the gender group members. With  $\mathbb{R}^2$  changes of .091 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently everpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this resulted in statistically significant composite intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .103 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results again showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Mechanical composite, the results showed no statistically significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

### Physics I - II

Seniors 1984-85. This sample tested only for gender group differences. The Mechanical composite equations again resulted in statistically significant intercept differences for the gender groups. An  $R^2$  change of .085 (p $\leq$ .01) for the Model 2 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

## Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The Mechanical composite prediction equations resulted in statistically significant intercept differences for the gander groups. Thus, with an R<sup>2</sup> change of .042 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best predictor for this group's Government course grade. Freshmen females would be consistently underpredicted in their Government grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Sophomore 1984-85. This sample tested only for gender group differences. Using the Mechanical composite as the predictor variable, the results showed statistically significant intercept differences for the gender groups. An  $R^2$  change of .071 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Mechanical composite as the predictor variable, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were invertigated by not including ethnicity variables in the prediction equations. Then, the White

and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this Mechanical composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .047 and .036 (p $\leq$ .01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Mechanical composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion, while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Mechanical composite in the equations resulted in statistically significant intercept differences for the gender and ethnic subgroup. With R<sup>2</sup> changes of .077 (p≤.01) for the Model 8 vs Model 9 comparison and .015 for the Model 11 vs 12 comparison, Models 8 and 11 would be the best prediction equations for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted in their Government grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. This sample, using the Mechanical high school composite score as the aptitude predictor variable, resulted in statistically significant slope differences for the gender group members. With an  $R^2$  change of .020 (ps.001) for the Model 7 vs Model 8 comparison, Model 7 was the best prediction equation for this sample. The change in the Government grade per unit change in the ASVAB Mechanical composite was significantly different for these junior males and females.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Machanical composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Saniors 1984-85. Similar to some of the previous samples, using the Mechanical composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With  $R^2$  change of .052 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these seniors. Using this composite, senior females would be consistently underpredicted in their Government grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When athnic group differences were investigated using this composite, the results showed no statistically significant slope or intercept differences for the White and Black ethnic group members. Again, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

## History

Freshmen 1984-85. The use of the ASVAB Mechanical composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .077 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or ince cept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the Mechanical high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .042 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the Mechanical high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .061 (p $\le$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations also resulted in statistically significant intercept differences for the White and Black ethnic group members. With an  $R^2$  change of .008 (p $\leq$ .001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the predictor variable, White sophomores would be consistently underpredicted in their History grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. This sample, using the Mechanical high school composite score as the aptitude predictor variable, resulted in statistically significant slope differences for the gender group members. With an  $R^2$  change of .007 (p $\leq$ .001) for the Model 7 vs Model 8 comparison, Model 7 was the best prediction equation for this sample. The change in the History grade per unit change in the ASVAB Mechanical composite was significantly different for these sophomore males and females.

The use of this ASVAB composite in the equations also resulted in statistically significant intercept differences for the White, Black and Hispanic ethnic group members. With an R2 change of (p≤.001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for Using this composite as the predictor variable, this sample. White Hispanic suphomores would рe consistently and underpredicted in their History grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1934-85. Like the previous sample, using the Mechanical high school composite score as the aptitude predictor variable resulted in statistically significant slope differences

in the prediction equations for the two junior gender groups. With an  $\mathbb{R}^2$  change of .009 (p $\leq$ .001) for the Model / vs Model 8 comparison, Model 7 would be the best prediction equation for this sample. Thus, the change in the History grade per unit change in the ASVAB Mechanical composite was significantly different for these junior males and females.

The use of this ASVAB composite in the equations resulted in statistically significant intercept differences for the White and Black ethnic group members. An  $\mathbb{R}^2$  change of .017 (p $\leq$ .001) for the Model 11 vs Model 12 comparison was evidenced. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the predictor variable, White juniors would be consistently underpredicted in their History grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Mechanical high school composite score as the aptitude predictor variable, the results showed statistically significant slope differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .014 ( $p \le .01$ ) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. Again, the change in the History grade per unit change in the Mechanical high school composite was significantly different for freshmen males and females.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

<u>Seniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Mechanical composite in the prediction equations resulted in statistically significant intercept differences for the gender group members. change of .061 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison was evidenced. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their History grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Statistically significant intercept differences also resulted between the White and Black ethnic subgroups. With an  $\mathbb{R}^2$  change of .036 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Mechanical composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

### Foreign Language

Freshmen 1984-85. After collapsing across ethnic groups and then collapsing across gender groups, the use of the ASVAB Mechanical composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. The results showed an  $R^2$  change of .090 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups. Therefore, Model 12, containing the unit vector and the Mechanical composite score, could be the best prediction equation for this sample's Foreign Language grades.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Mechanical composite within the equations, the results showed statistically significant slope differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 7 and Model 8 comparison was approximately .011 (p $\leq$ .01), with Model 7 being the best prediction equation for this sample's Foreign Language grade. Thus, the change in the Foreign Language grade per unit change in the Mechanical high school composite was significantly different for freshmen males and females.

When the model comparisons were made for ethnic group differences, using the Mechanical composite within the equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Model 12, which contailed only the unit vector

and the Mechanical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. the Mechanical prediction equations showed statistically significant slope differences between the male and female The R<sup>2</sup> change for the Model 7 and Model 8 regression lines. comparison was approximately .013 (p≤.01), with Model 7 being the best prediction equation for this sample's Foreign Language The change in the Foreign Language grade per unit change in the Mechanical high school composite was significantly different for sophomore males and females.

When the model comparisons were made for ethnic group differences using of this Mechanical composite in the prediction equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Sophomores 1985-86. Using the ASVAB Mechanical composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .086 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of the Mechanical composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and

Model 9 comparison was approximately .124 ( $p\le.01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the Mechanical predictor composite resulted in no statistically significant slope or intercept differences for the ethnic group members. Model 12 could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Hispanic ethnic group differences were studied including the gender variables in the equations. The Mechanical prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The R' change for the Model 8 and Model 9 comparison was approximately .094 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, the Mechanical prediction equations resulted in statistically significant intercept differences between the male and female The R2 change for the Model 8 and Model 9 regression lines. comparison was approximately .044 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The Mechanical composite prediction equations resulted in no statistically significant slope or intercept differences for the two ethnic groups. Model 12 could be used in the prediction of Foreign Language course grade for these individuals.

### Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite Sthnic group differences. Using the Mechanical composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Mechanical composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested only for white and Nonwhite ethnic group differences. Again, using the Mechanical composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Mechanical composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

At first, using this composite with this Freshmen 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. prediction Mechanical equations resulted statistically in significant intercept differences between the male and female The R<sup>2</sup> change for the Model 8 and Model 9 regression lines. comparison was approximately .040 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Typing grade. using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Whus. Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Mechanical prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .054 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. statistically significant intercept . The R<sup>2</sup> again showed results differences between the male and female regression lines. change for the Model 8 and Model 9 comparison was approximately .077 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The Mechanical prediction equations showed statistically significant slope differences between the male and female regression lines. The R<sup>2</sup> change for

the Model 7 and Model 8 comparison was approximately .026 ( $p\leq .01$ ), with Model 7 being the best prediction equation for this sample's Typing grade. The change in the Typing grade per unit change in the Mechanical high school composite was significantly different for sophomore males and females.

Using the Mechanical composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Typing course grade for these sophomores.

<u>Juniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The R2 change for the Model 8 and Model 9 comparison was approximately .113 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .071 (p<.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Mechanical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Seniors 1984-85. This sample tested only for gender group differences. The Mechanical composite equations resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .052 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

## Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB Mechanical composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .095 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

This sample also tested only for gender Juniors 1984-85. group differences. Again, using the Mechanical composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .144 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. This sample tested for gender group differences. As in the previous sample, using the Mechanical composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .069 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. Like the junior samples, this sample tested for gender group differences. Using the Mechanical composite equations, prediction the results statistically showed significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change of .098 (p≤.01) for the Model 8 vs Molel 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the Whate and Black ethnic group differences were studied by not including The prediction equations the gender variables in the equations. with the ASVAB Mechanical composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .086 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Mechanical composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $R^2$  change of .081 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Mechanical composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an  $R^2$  change of .116 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the

common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Mechanical composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomore 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Norwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction ASVAB equations with the Mechanical composite statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change of .102 (p $\le$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Mechanical composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $R^2$  change of .047 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Mechanical composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an R<sup>2</sup> change of .097 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Mechanical composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Mechanical prediction resulted composite equations statistically significant intercept differences for the gender group members and resulted in an  $\mathbb{R}^2$  change of .069 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Mechanical composite, the results showed no statistically significant slope cr intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

At first, using this composite with this <u>Juniors 1985-86.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the Mechanical composite equations, resulted in statistically significant intercept differences for the gender group members. An R2 change of .163 (p<.01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Mechanical composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Nonwhite athnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Machanical composite equations resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .090 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAE Mechanical composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

#### Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Hechanical composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .132 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample tested for gender group differences. Again, using the Mechanical composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .104 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. Collapsing across the echnic groups, the model comparisons tested for gender group differences. Usin the ASVAB Mechanical predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .167 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be

consistently underpredicted in their Conputer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample tested for gender group differences. The Mechanical composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Mechanical composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Inble 8.</u> Summary of Equity Findings for Prediction of High School Course Grades by Mechanical & Crafts High School Composite

Course		Sex	Ethnicity	Sex*Ethnicity
English 1-1	IV			
Fresh	84-85	\$	E	NS
Fresh	85-86	1	1	MR
Soph	84-85	5	į	MS
Soph	85-86	\$	1 1	NS NS
Jr.	£4.05	\$	;	X5
16	85-86	8	E	##
<b>8</b> r	84 - 85	ŧ	E	NS
General Mo	th			
Fresh	84 -85	1	Į Į	MS
Fresh	85-86	E	E	24
Soph	84-85	Ε	E	MS
8-aph	85-86	1	E	MS
Jr	84-85	I	E	MS
Jr.	85-86	1	E	MS
\$r	84-85	E	E	MS
Algebra				
Fresh	84 - 85	1	£	MS
Fresh	85-86	ı	k	NS
Soph	84-85	ı	E	MS
Soph	85-86	1	E	MS
3r	84-85	1	E	Mà
J٢	85-86	\$	e.	ME
Sr	84-05	5	E	MF
Geometry				
Fresh	85-86	1	į E	MS
Soph	84 - 85	1	E	NS
<b>≱oph</b>	85-86	1	1 1	MS
Jr.	84 - 85	8	E	ak .
Jr	85 86	1	1	N5
⊈r.	84-85	E	E	NS

Note. NS = Not significant; 1 = Intercept differences; S = ilope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested dum to small sample sizes.

Table 8, (Continued)

Problems of the Control of the Contr

1		18476-01		<del></del>
	Course	Sex	Ethnicity	Sex*Ethnicity
· · · · · · · · · · · · · · · · · · ·	General Science Fresh 84-85 Fresh 85-86 Soph 84-85 Soph 85-86 Jr 85-86 \$r 84-85	M8 1 1 1 1	MS E E I E MT	1 MS MS MS MS MS
	Biology Fresh 84-85 Fresh 85-86 Soph 84-85 Soph 85-86 Jr 84-85 Jr 85-86 Sr 84-85	1 1 8 - 1 1 1	E E E MT	MS MS MS MS MS MS MS
	Chemistry Fresh 85-86 Boph 84-85 Soph 85-86 Jr 84-85 Jr 85-86	1 1 1 1	NT NT NT E E	US MS MS MS MS
	Physics Sr 84-85 Government	1	E MT	MS MS
	Fresh 84-85 Soph 34-85 Soph 85-86 Jr 84-85 Jr 85-86 8r 84-85	1 1 1 8	NT NT 1 1 E E	MS MS MS MS MS
	History Fresh 84-85 Fresh 85-86 Soph 84-85 Soph 85-86 Ur 84-85 Ur 85-86	1 1 1 8 8	E F I I L	MB MB MB MS MS MS
	Foreign Lenguage Fresh 84-85 Fresh 85-86 Soph 84-85 Soph 85-86	. ————————————————————————————————————	1 E E E E	MS MS MS MS
	Jr 84-85 Jr 85-36 Sr 84-85 Secretary & Ofc	! !	E	MS MS MS
	Jr 85-86 8₁ 84-85	NT NT	E	NS NS

<u>Note</u>. NS = Not significant; i = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NI = Not tested due to small sample sizes.

Table 8. (Concluded)

Course	į	··· Sex	Ethnicity	Sex*Ethnicity
Typing				
Fresh	84-85	I	E	MS
Fresh	85-85	1	E	NS
Soph	84-85	1	·   E	NS
Soph	85-86	8	E	. NS
Jr <sup>°</sup>	84-85	1	E	MS
Jr	85-86	1	E	J MS
\$r	84-85	1	HT	HS
Accounting		<del></del>		
Soph	85-86	1	NT	NS
Jr	84-85	i	NT	NS
jr	.85-86	1	NT	MS
8r	84-85	1	NT	HE
iome Econor	nics	· <del>- · · · · · · · · · · · · · · · · · ·</del>		
Fresh	84-85	1	1	MS
Fresh	85-86	1	E	NS
Suph	84-85	1		NS NS
Soph	85-86	1	E	NS
Jr	84-85	I	E	NS.
J٢	85-86	1	1 E E	NS
Sr	84-85	1	Ε	NS
Computer P	rogram	······································		
Soph	85-86	1	MT	NS
Jr	84-85	Ī	NT	MS
Jr	85-86	i	WY	NS
Sr	84-85	Ē	ÑĪ	NS

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

# Business and Clerical High School Composite

#### English I - IV

Freshmen 1984-85. Using the Business high school composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 comparison. However, the Model 2 vs Model 5 comparison showed that these two models were not significantly different. Model 5 included the unit vector, the Business score by ethnicity two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 5 as the best prediction equation for this sample's English grade, no differential validity for the gender by Busniess score two-way interaction predictor variables was evidenced.

<u>Freshmen 1985-86</u>. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .964 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Business composite as the predictor variable freshmen

females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant slope differences among the White, Black and Hispanic regression lines. With an  $R^2$  change of .016 (p $\leq$ .001) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation for this sample. Thus, the change in the English grade per unit change in the Business high school composite was significantly different for White, Black and Hispanic freshmen.

Sophomores 1984-85. When the model comparisons were made for gender group differences, using the Business composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .004 (p $\leq$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Business composite was significantly different for this year's sophomore males and females.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed no statistically significant slope or intercept differences among the White, Black and Hispanic regression lines. Thus, Model 12, which contained the unit vector and the ASVAB Business composite, could be used in the prediction of English course grades obtained by sophomores for this year.

Sophomores 1985-86. When the model comparisons were made for gender group differences, using the Business composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .027 (p $\leq$ .001), with Model 8 being the best prediction equation for this group's English grade. Using the Business composite as the predictor variable, sophomore females would be consistently underpredicted in their English grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Business composite score as the aptitude measure also resulted in statistically significant intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .013 (p $\leq$ .001), with Model 11 being the best prediction equation for this sample. Thus, using the Business composite as the predictor variable White and Hispanic sophomores would be consistently

underpredicted in their English grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. When the model comparisons were made for gender group differences, using the Business composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .006 (p $\le$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Business composite was significantly different for these junior males and females.

Using the Business composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. Again, Model 12, which contained the unit vector and the ASVAB Business composite, could be used in the prediction of English course grades obtained by juniors for this year.

Juniors 1985-86. As in the 1984-85 school year, using the Business composite in the equations resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .008 (p $\le$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Business composite was significantly different for these junior males and females.

Using the Business composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

<u>Seniors 1984-85</u>. The ASVAB Business composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $\mathbb{R}^2$  change of .014 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

# General Math

Freshmen 1984-85. This sample, using the Business high school composite score as the aptitude predictor variable, showed no statistically significant slope or intercept differences in the prediction equations for the two freshmen gender groups or the White, Black and Hispanic ethnic groups. Models 9 or 12, containing only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

<u>Freshmen 1985-86</u>. For this sample, the results also showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Again, Models 9 or 12 could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Business composite in the equations, showed no statistically significant slope or intercept differences between gender subgroups or the White and Black ethnic group members. Thus, Model 9 or 12, containing the unit vector and the Business composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. As in the previous samples, using the Business high school composite score as the aptitude predictor variable, showed no statistically significant slope or intercept differences between the gender or White and Black subgroups. Again, Models 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Business high school composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences between the gender or ethnic subgroups. Thus, Model

9 or 12, containing the unit vector and the Business composite score, could be used in predicting General Math course grade for these individuals.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

The ASVAB Business composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior ethnic groups and resulted in an  $R^2$  change of .042 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite White seniors would be consistently underpredicted in their General Math grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

#### Algebra

Freshmen 1984-85. Using the ASVAB Business composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $\mathbb{R}^2$  change of .015 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the Business composite, the results showed no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Freshmen 1985-86. With the Business composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender and ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  changes of .015 and .014 (p $\leq$ .001) for the Model 8 vs Model 9 and Model 11 vs Model 12 tests. Therefore, Models 8 and 11 would be the best prediction equations for this sample. Using this composite, freshmen females would be consistently underpredicted in their

Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used. Conversely, White freshmen would be consistently underpredicted in their Algebra course grades if the common regression line were used, while Nonwhite freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. In this 1984-85 sample, using the Business high school composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender or ethnic group members, which in this sample were defined as White and Nonwhite. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for sophomores during this school year.

Sophomores 1985-86. In this sample, using the Business high school composite, the results showed no statistically significant slope or intercept differences for the gender subgroups or the White and Nonwhite ethnic group members. Thus, Model 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

Juniors 1984-85. In this 1984-85 sample, using the Business high school composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender or ethnic group members, which in this sample were defined as White and Black. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the ASVAB Business composite as the predictor variable, the results showed no statistically significant slope or intercept differences for the gender or ethnic groups. Model 9 or 12 could be used in the prediction of Algebra course grade for these juniors.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by including the gender variables in the equations. Again, using composite in the equations Business resulted in statistically significant slope or intercept differences for the gender or ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 9 or 12 could be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted in no statistically significant slope or intercept differences for the gender subgroups or the three ethnic groups. Thus, Model 9 or 12, containing the unit vector and the Business high school composite score, could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Business composite in the equations also resulted in no statistically significant slope of intercept differences for the gender group or three ethnic groups. Again, Model 9 or 12 could be used in the prediction of Geometry course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Business composite as the aptitude measure, the results showed no statistically significant slope or intercept differences for the gender group members. Using this composite, Model 9 could be used in the prediction of Geometry course grades obtained by sophomores during this school year.

When the model comparisons were made for ethnic group differences, using the Business composite within the equations, the results showed statistically significant slope differences between the White and Black regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .035 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB Business composite was significantly different for these White and Black sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Business composite as the aptitude measure, the results showed no

statistically significant slope of intercept differences for the gender or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Business composite as the aptitude measure, the results showed no statistically significant slope or intercept differences for the gender group members. Thus, Model 9 could be used in the prediction of Geometry course grades obtained by juniors during the 1985-86 school year.

When the model comparisons were made for ethnic group differences using the Business composite, the results showed statistically significant slope differences for the gender group members. With an  $R^2$  change of .063 (p $\leq$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation for Geometry course grade for these juniors. The change in the Geometry grade per unit change in the ASVAB Business composite was significantly different for these White and Nonwhite juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Business composite equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

#### Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The Business composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

#### General Science

Freshmen 1984-85. Using the Business high school composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 comparison. However, the Model 2 vs Model 5 comparsion showed that these two models were not significantly different. Model 5 included the unit vector, the I sixess score by ethnicity two-way interaction

predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 5 as the best prediction equation for this sample's General Science grade, no differential validiy for the gender by Busniess score two-way interaction predictor variables was evidenced.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Business composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group members. Model 9, which contained the unit vector and the Business composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

When the model comparisons were made for ethnic group differences using the Business composite, the results showed statistically significant slope differences for the gender group members. With an  $R^2$  change of .036 (p $\leq$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation for General Science course grade for these freshmen. The change in the General Science grade per unit change in the ASVAB Business composite was significantly different for these White and Black freshmen.

Sophomores 1984-85. In this 1984-85 sample, using the Business composite score as the aptitude predictor variable, the results also showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Nonwhite. Again, Models 9 or 12 could be used in the prediction of General Science course grades obtained by sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Business composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group members. Model 9, which contained the unit vector and the Business composite score, could be used in the prediction of General Science course grades obtained by sophomores in 1985-86.

When the model comparisons were made for ethnic group differences, using the lusiness composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .055 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White sophomores

would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Business composite within the prediction equation resulted in no statistically significant slope or intercept differences between the male and female regression lines. Again, Model 9 could be used in the prediction of General Science course grades obtained by juniors in this school year.

When the model comparisons were made for ethnic group differences, using the Business composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .082 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White sophomores would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, using the Business composite within the prediction equation resulted no in statistically significant intercept differences between the male and female regression lines. Thus, Model 9 could be used in the prediction of General Science course grades obtained by juniors in the 1985-86 school year.

This Business composite prediction equation resulted in statistically significant slope differences for the ethnic group members. The  $\mathbb{R}^2$  change for the Model 10 and Model 11 comparison was approximately .025 (p $\leq$ .01), with Model 10 being the best prediction equation. The change in the General Science grade per unit change in the ASVAB Business composite was significantly different for these White and Nonwhite juniors.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the Business composite within the prediction equation resulted in no statistically significant slope or intercept differences between the male and female regression lines. Thus, Model 9 could be used in the prediction of General Science course grades obtained by seniors in the 1984-85 school year.

#### Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Business composite within the prediction equation resulted in no statistically significant slope or intercept differences between the gender or ethnic regression lines. Again, Model 9 or 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

<u>Freshmen 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .009 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Business composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

<u>Sophomores 1984-85</u>. In this 1984-85 sample, using the Business composite score as the aptitude predictor variable, the results also showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White, Black and Hispanic. Again, Models 9 or 12 could be used in the prediction of Biology course grades obtained by sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences between the gender group members and an  $R^2$  change of .026 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. The use of this composite resulted in no statistically significant slope or intercept differences in the prediction equations for the gender and White and Nonwhite ethnic groups. Thus, Model 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. Using the Business composite as the predictor variable resulted in statistically significant slope differences for the gender groups. With an  $R^2$  change of .029 (p $\leq$ .01) for the Model 7 vs Model 8 comparison, Model 7 would be the best prediction equation of Biology course grade for these juniors. The change in the Biology grade per unit change in the ASVAB Business composite was significantly different for these male and female juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Business composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Biology course grade for these seniors.

The use of this Business composite in the equations resulted in statistically significant intercept differences for the two ethnic group members. With an  $\mathbb{R}^2$  change of .061 (p $\leq$ .01) for the Model 11 vs Model 12 comparisons, Model 11 would be the best prediction equations for these seniors. Using this composite, White seniors would be consistently underpredicted in their Biology grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

### Chemistry I - II

<u>Freshmen 1985-86</u>. This sample tested only for gender group differences. Using the Business composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which

contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these freshmen.

Sophomores 1984-85. This sample also tested only for gender group differences. Again, with the Business composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these sophomores.

Sophomores 1985-86. This sample tested only for gender group differences. Using the Business composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an R<sup>2</sup> change of .019 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Business composite in the equations resulted in statistically significant intercept differences for the gender group members. With  $R^2$  change of .022 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed statistically significant slope differences for White and Nonwhite juniors. With an  $R^2$  change of .027 (p $\leq$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation of Chemistry course grade for these juniors. The change in the Chemistry grade per unit change in the ASVAB Business composite was significantly different for these White and Nonwhite juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this composite resulted in no statistically significant slope or intercept differences for the gender groups or the White and Nonwhite ethnic groups. Thus, Model 9 or 12, which contained

only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

<u>Seniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the the results Business composite, showed no statistically significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

#### Physics I - II

Juniors 1985-86. This sample tested only for gender group differences. The use of this composite resulted in no statistically significant slope or intercept differences in the prediction equations for the gender groups. Model 9 could be used in the prediction of Physics course grades for these juniors.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Business composite equations again resulted in no statistically significant intercept differences for the gender groups. Model 9, containing the unit vector and the Business high school composite score, could be used in the prediction of Physics course grade for these individuals.

#### Government and Civics

<u>Freshmen 1984-85</u>. This sample tested only for gender group differences. The Business composite equations again resulted in no statistically significant intercept differences for the gender groups. Model 9, containing the unit vector and the Business high school composite score, could be used in the prediction of Government course grade for these individuals.

Sophomore 1984-85. This sample also tested only for gender group differences. The Business composite equations again resulted in no statistically significant intercept differences for the gender groups. Model 9, containing the unit vector and the Business high school composite score, could be used in the prediction of Government course grade for these individuals.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Business composite equations again resulted in no statistically

significant intercept differences for the gender groups. Model 9, containing the unit vector and the Business high school composite score, could be used in the prediction of Government course grade for these individuals.

The use of this Business composite in the equations resulted in statistically significant intercept differences for the two ethnic group members. With  $R^2$  change of .019 (p $\leq$ .01) for the Model 11 vs Model 12 comparisons, Model 11 would be the best prediction equations for these sophomores. Using this composite, White sophomores would be consistently underpredicted in their Government grades if the common regression line were used, while Hispanic sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in previous samples, the Business composite equations resulted in no statistically significant intercept differences for the gender groups. Model 9, containing the unit vector and the Business high school composite score, could be used in the prediction of Government course grade for these individuals.

The use of this Business composite in the equations again resulted in statistically significant intercept differences for the ethnic subgroups. With an  $R^2$  change of .011 (p $\leq$ .01) for the Model 11 vs 12 comparison, Model 11 would be the best prediction equations for these juniors. Using this composite, White juniors would be consistently underpredicted in their Government grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for gender groups or the White and Black ethnic groups. Thus, Model 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Seniors 1984-85. Similar to some of the previous samples, using the Business composite score as the aptitude predictor variable, resulted in no statistically significant intercept differences for the gender or White and Black ethnic group members. Again, Models 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

# **History**

Freshmen 1984-85. The use of the ASVAB Business composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .008 (p $\le$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAR composite in the equations resulted in statistically significant slope differences for the White, Black and Hispanic ethnic group members. With an  $R^2$  change of .012 (p $\leq$ .001) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation of History course grade for these freshmen. The change in the History grade per unit change in the ASVAB Business composite was significantly different for these White, Black and Hispanic freshmen.

Freshmen 1985-86. This sample, using the Business high school composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of History course grade for these freshmen.

Sophomores 1984-85. Using the Business high school composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of History course grade for these sophomores.

Sophomores 1985-86. The use of the ASVAB Business composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .015 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in statistically significant slope differences for the White, Black and Hispanic ethnic group members. With an  $\mathbb{R}^2$  change of .017 (p $\leq$ .001) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation of History course grade for these sophomores. The change in the History grade per unit change in the ASVAB Business composite was significantly different for these White, Black and Hispanic sophomores.

Juniors 1984-85. The use of this ASVAB composite in the equations resulted in statistically significant intercept differences for gender and the White and Black ethnic group members.  $\mathbb{R}^2$  changes of .007 (p $\leq$ .001) for the Model 8 vs Model 9 equations resulted and Model 11 vs Model 12 comparisons were evidenced. Therefore, Models 8 and 11 would be the best prediction equations for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would consistently overpredicted the common be if regression line were used. Conversely, White juniors would be consistently underpredicted in their History grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Business high school composite score as the aptitude predictor variable, the results showed statistically significant slope differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .013 (p $\leq$ .01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the History grade per unit change in the Business high school composite was significantly different for junior males and females.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Business composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contained only the

unit vector and the Business composite score in the prediction equation, could be used in the prediction of History course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $\mathbb{R}^2$  change of .026 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Business composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

### Foreign Language

Freshmen 1984-85. After collapsing across ethnic groups and then collapsing across gender groups, the use of the ASVAB Business composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. The results showed an  $R^2$  change of .024 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in statistically significant slope differences for the White, Black and Hispanic ethnic group members. With an  $\mathbb{R}^2$  change of .010 (p $\leq$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation of Foreign Language course grade for these freshmen. The change in the Foreign Language grade per unit change in the ASVAB Business composite was significantly different for these White, Black and Hispanic freshmen.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Business composite within the equations, the results showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .024 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Business composite within the equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Math composite within the equations, the results again showed statistically significant intercept differences between the male and female regression lines. The  $\rm R^2$  change for the Model 8 and Model 9 comparison was approximately .047 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

the model comparisons were made for ethnic group differences using of this Business composite in the prediction equations, the results also showed statistically significant intercept differences between the White, Black and Hispanic regression lines. Again, the Business prediction equations showed statistically significant intercept differences between the White, Black and Hispanic regression lines. The R<sup>2</sup> change for the Model 11 and Model 12 comparison was approximately .010 (p≤.01), with Model 11 being the best prediction equation for this sample's Foreign Language grade. White and Hispanic sophomores would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. Using the ASVAB Business composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. of the Business composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The R2 change for the Model 8 and Model 9 comparison was approximately .057 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the Business predictor composite resulted in no statistically significant slope or intercept differences for the ethnic group members. Model 12 could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Business prediction equations resulted in no statistically significant slope or intercept differences for the gender or White and Hispanic ethnic group members. Thus, Model 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

<u>Seniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by including the gender variables in the equations. Again, the composite prediction equations Business resulted statistically significant slope or intercept differences for the gender or two ethnic groups. Model 9 or 12 could be used in the prediction of Foreign Language course grade individuals.

# Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite ethnic group differences. Using the Business composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Business composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested only for White and Nonwhite ethnic group differences. Again, using the Business composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Business composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Business prediction equations resulted in no statistically significant slope or intercept differences for the gender or White, Black and Hispanic ethnic group members. Thus, Model 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, the Business prediction equations resulted in no statistically significant slope or intercept differences for the gender or White and Hispanic ethnic group members. Thus, Model 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The

results again showed statistically significant intercept differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 8 and Model 9 comparison was approximately .011 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The Business prediction equations showed no statistically significant slope or intercept differences for the gender or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .032 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including

ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous samples, the results showed no statistically significant slope or intercept differences for the gender or White and Nonwhite athnic group members. Thus, Model 9 or 12, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Business composite equations resulted in no statistically significant slope or intercept differences between the gender regression lines. Model 9, which contained only the unit vector and the Business composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by seniors during this school year.

# Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB Business composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .019 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. This sample tested for gender group Again, using the Business composite prediction differences. equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .035 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades the if used, while junior males regression line were would consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested only for gender group differences. Using the Business composite prediction equations, the results showed no statistically significant slope or intercept differences in the prediction equations for the two junior gender groups. Thus, Model 9 could be used in the prediction of Accounting grades obtained by juniors during this school year.

Seniors 1984-85. Like the junior samples, this sample tested Using the Business composite for gender group differences. showed prediction equations, the results statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $\mathbb{R}^2$  change of .023 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

## Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations the ASVAB Business composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .022 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Business composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $R^2$  change of .062 (p<.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

<u>Freshmen 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Business composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an  $R^2$  change of .040 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be

consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Business composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two echnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomore 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Business composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change of .035 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted ASVAB Business composite, the results usina the statistically significant intercept differences in the prediction equations for the two ethnic groups. An R<sup>2</sup> change of .031 (p≤.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics these sophomores. Using this predictor rourse grade for mposite, White sophomores would be consistently underpredicted their Home Economics grades if the common regression line were sophomores would be consistently Nonwhite overpredicted if a common regression line were used.

Scphomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Business composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $R^2$  change of .030 (p $\leq$ .01) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison. prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a com on regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Business composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Business composite prediction equations resulted in no statistically significant slope or intercept differences in the prediction equations for the gender or ethnic groups. Model 9 or 12 could be used in the prediction of Home Economics course grade for these juniors.

<u>Juniors 1985-86.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the Business composite equations, resulted in statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .077 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Business composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

<u>Seniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Business composite equations resulted in statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .030 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Business composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Mode. 12 could be used in the prediction of Home Economics course grade for these seniors.

### Computer Programming

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. Using the Business composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $R^2$  change of .034 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample tested for gender group differences. However, using the Business composite as a predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contained the unit vector and the Business composite score, could be used in the prediction of Computer Programming grades for these individuals.

Collapsing across the ethnic groups, the <u>Juniors 1985-86.</u> model comparisons tested for gender group differences. Using the Business high school predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .049 (p≤.01) for the Model E vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this composite junior Using this females would consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. As in the previous Computer Programming samples, this sample tested for gender group differences. The Business composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Business composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 9.</u> Summary of Equity Findings for Prediction of High School Course Grades by Business & Clerical High School Composite

Course	j	Sex	Ethnicity	Sex*Ethnicity
English I-1	IV	it is		
Fresh	84-85	NS	s	1
fresh	85-86	ì	s	NS
Soph	84-85	Š	Ě	NS NS
Soph	85-86	i	Ī	NS
 Jr	84-85	\$	Ë	1
		S	5	HS
Jr	85-86		E	, NS
Sr	84-85	1	E	NS
General Ma			Ì	
Fresh	84-85	E	E	NS
Fresh	85-86	E	Ε	NS
Soph	84-85	E	E	NS
Soph	85-86	E	E	NS
Jr	84-85	E	E	NS
Jr	85-86	E	Ē	NS
Sr	84 - 85	Ē	Ī	NS
Algebra			<del> </del>	1
Fresh	84-85	1	E	NS
Fresh	85-86	i	ī	NS
	84-85	Ė	E	N .
Soph			l t	NS
Soph	85-86	£	Ε	NS NS
J٢	84-85	E	E	NS
Jr	85-86	E	E	NS
Sr	84-85	E	E	NS
Geometry				
Fresh	85-86	E	E	NS
Soph	84-85	Ε	E	NS
Soph	85-86	E	s	NS
Jr	84 - 85	E	E	NS
Jr	85-86	Ē	s	NS
Sr	84-85	Ē	E	NS
Calculus				1
Jr	85-86	E	NT	NS
General Sc				<del></del> -
	84-85	NC		1 .
Fresh		NS	S	l l
Fresh		į	S	NS
Soph	84-85	E	E	NS
Soph	85-86	E	1	NS
Jr	84 - 85	€	1	NS
Jr	85-86	E	S	NS
Sr	84-85	E	NT	NS NS
Biology		-		
Fresh	84-85	ε	E	NS
Fresh	85-86	ī	Ē	NS
Soph	84-85	Ė	Ē	NS
Soph	85-86	í	E	NS
			-	
ήr	84-85	E	E	NS
j Jr	85-86	S	NT	NS
Sr	84-85	E	1	} NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 9. (Continued)

ſ					
	Course		Sex	Ethnicity	Sex*Ethnicity
a 21 <b>3</b> . 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.	Chemistry				<u> </u>
	Fresh	85-86	Ε	NT	NS
	Soph	84-85	Ē	HT	NS
	Soph	85-86	ī	NT	NS
1	Jr	84-85	i	s	NS
	Jr.	85-86	Ė	Ĕ	NS
	Sr	84-85	Ē	Ē	NS
	Physics				
	Jr	85-86	E	NT NT	NS
	Sr	84-85	E	NT	NS
	Government				
	Fresh	84-85	E	NT	NS
[	Soph	84-85	Ě	NT	NS
· · · · ·	Soph	85-86	Ē	i ï	NS
j	Jr	84-85	Ē	li	NS
l	Jr 31	85-86	Ē	Ė	NS
	Sr	84-85	E	E	NS
	History				
	Fresh	84-85	1	s	l ns
	Fresh	85-86	Ė	E	NS
i	Soph	84-85	Ē	١	NS
			Ī	s	
	Soph	85-86			NS
	ηĻ	84-85	1	I	NS
	3r Sr	85 - 86 84 - 85	S E	I E	NS NS
	Foreign La	DOLLAGO		<del></del>	+
	Fresh	84-85	1	s	NS
	rresn Fresh	85-86	i I	E E	NS NS
j					
	Soph	84-85	1	1	NS
	Soph	85-86	1	E	NS
	٦r	84-85	1	E	NS
	Jr Sr	85 - 86 84 - 85	E E	E E	NS NS
	Secretary	& Ofc		<del> </del>	+
	Jr	85-86	NT	E	NS
	Sr.	84-85	NT	Ē	NS
	Typing				
i	Fresh	84-85	Ε	Ε	NS
	Fresh	85-86	Ē	Ē	NS
		84-85	i	Ē	NS
	Soph		E	E	
	Soph	85-86			NS
	ju	84-85	I	E	NS
	Ĩι	85-86	E	E	NS
!	Sr	84 - 85	E	NT	NS

<u>Mote</u>. MS = Not significant; 1 = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 9. (Concluded)

Course		Sex	Ethnicity	Sex*Ethnicity
Accounting	.,			1
Soph	85-86	t	NT	NS
Jr	84 - 85	1	NT	NS
J٢	85-86	E	NT	NS
\$r	84-85	1	NT	NS
Home Econor	nics			
Fresh	84-85	1	1 1	NS
Fresh	85-86	1	E	NS
Soph	84-85	1	1	NS
Soph	85-86	I	E	NS
Jr	84-85	E	E E	NS
J۲	85-86	1	E	NS
Sr	84-85	1	E	NS
Computer P	rogram			
Soph	85-86	I	NT	NS
Jr	84-85	E	NT	NS
٦r	85-86	I	NT	NS
Sr	84-85	E	NT NT	NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

# Electronics and Electrical High School Composite

#### English I - IV

Freshmen 1984-85. Using the Electronics high school composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Electronics composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's English grade, no differential validity was evidenced for the ethnicity by Electronics score two-way interaction variables or the sex by Electronics score two-way interaction variables.

Freshmen 1985-86. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .049 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using this ASVAB composite resulted in no statistically significant slope or intercept differences among the White, Black and Hispanic regression lines. Thus, Model 12, which contained the unit vector and the Electronics high school composite score, could be used in the prediction of English grades obtained by freshmen during this school year

Sophomores 1984-85. When the model comparise were made for gender group differences, using the Electronics composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .012 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Electronics composite was significantly different for this year's sophomore males and females.

Using this composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

<u>Sophomores 1985-86</u>. The model comparisons for gender group differences using the Electronics high school composite showed statistically significant slope differences between the male and female regression lines, with Model 7 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .009 (p $\leq$ .001). Thus, the change in the English grade per unit change in the ASVAB Electronics composite was significantly different for these sophomore males and females.

Statistically significant intercept differences resulted among the White, Black and Hispanic ethnic subgroups. With an R<sup>2</sup> change of .009 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Electronics composite were used in the prediction of English course grade, White and Hispanic sophomores would be consistently underpredicted on the criterion while Black sophomores would be consistently overpredicted.

<u>Juniors 1984-85</u>. When the model comparisons were made for gender group differences, using the Electronics high school composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .011 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Electronics composite was significantly different for these junior males and females.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hispanic juniors. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of English course grade for these individuals.

<u>Juniors 1985-86</u>. As in the 1984-85 school year, using the Electronics high school composite in the equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .009 (p $\le$ .001), with Model 7 being the best prediction equation for English grade. Thus, the change in the English grade per unit change in the ASVAB Electronics composite was also significantly different for these junior males and females.

Again, using this composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. This sample, using the Electronics high school composite score as the aptitude predictor variable, showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $\mathbb{R}^2$  change of .050 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Model 12, containing only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of English course grade for these seniors.

# General Math

<u>Freshmen 1984-85</u>. This sample, using the Electronics high school composite score as the aptitude predictor variable, showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .013 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this

sample. Using the Electronics composite as the predictor variable freshmen females would be consistently underpredicted in their General Math grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Model 12, containing only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Freshmen 1985-86. For this sample, the results also showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Models 9 or 12, containing only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

<u>Sophomores 1984-85</u>. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

<u>Sophomores 1985-86</u>. This sample, using the Electronics composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .045 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Electronics composite were used in the prediction of General Math course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Electronics composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the Electronics high school composite score as the aptitude predictor variable, showed no statistically significant slope or intercept differences for the gender or White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics high school composite score as the aptitude predictor variable, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .041 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Electronics composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently overpredicted.

Using the Electronics composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12, containing the unit vector and the Electronics composite score, could be used in predicting General Math course grade for these individuals.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

#### Algebra

<u>Freshmen 1984-85</u>. Using the ASVAB Electronics composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups with an  $R^2$  change of .041 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Freshmen 1985-86. With the Electronics composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in R2 changes of .059 (p<.001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Sophomores 1984-85. In this 1984-85 sample, using the Electronics high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .036 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

Sophomores 1985-86. In this sample, using the Electronics high school composite, the results also showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .027 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Electronics composite as the predictor resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

Juniors 1984-85. In this 1984-85 sample, using the Electronics high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .049 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for these juniors.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .055 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these Using this composite, senior females consistently underpredicted in their Algebra grades if the common line were used, while senior males regression consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in statistically significant slope differences for the ethnic group members, which in this sample were defined as White and Nonwhite. With an  $\mathbb{R}^2$  change of .022 (p $\leq$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation for

this sample. The change in the Algebra grade per unit change in the ASVAB Electronics composite was significantly different for these White and Nonwhite seniors.

#### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black, and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted in an  $R^2$  change of .019 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Geometry grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the Electronics composite in the prediction equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black, and Hispanic ethnic group differences were studied by not including the gender variables in the eg ations. composite in the equations resulted the Electronics statistically significant intercept differences for the gender group members. With an  $R^2$  change of .030 (p $\le$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the Electronics composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

<u>Sophomores 1985-86</u>. At f rst, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Electronics composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .040 (p<.01) for the Model 8

vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Electronics composite within the equations, the results showed statistically significant slope differences between the White and Black regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .017 (p<.01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB Electronics composite was significantly different for these White and Black sophomores.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Electronics composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .045 (p $\le$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the Electronics composite resulted in no statistically significant slope of intercept differences for the two ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in some of the other Geometry samples, using the Electronics composite in the prediction equations resulted in statistically significant intercept differences for the gender group members. With an R<sup>2</sup> change of .052 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these juniors. Using this composite, junior females would be consistently underpredicted in their Geometry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Electronics composite, the results showed statistically significant slope differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .040 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB Electronics composite was significantly different for these White and Nonwhite juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Electronics composite equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

### Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The Electronics composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

#### General Science

Freshmen 1984-85. Using the Electronics high school composite with this sample, the results showed no statistically significant differences between the Mcdel 2 vs Model 4 comparison. Model 4 included the unit vector, the Electronics composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by Electronics score two-way interaction variables or the sex by Electronics score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics

composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12, which contained the unit vector and the Electronics composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

Sophomores 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an R² change of .032 (p≤.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite sophomores, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .041 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Electronics composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Model 12, which contained the unit vector and the Electronics composite score, could be used in the prediction of General Science course grades obtained by sophomores in 1985-86.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics composite within the prediction equation resulted in no statistically significant slope or intercept differences between

the male and female regression lines. Again, Model 9 could be used in the prediction of General Science course grades obtained by juniors in this school year.

When the model comparisons were made for ethnic group differences, using the Electronics composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .063 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White sophomores would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the composite, the results showed statistically Electronics significant inter t differences between the male and female The R<sup>2</sup> change for the Model 8 and Model 9 regression lines. comparison was approximately .026 (p≤.01), with Model 8 being the best prediction equation for this sample's General Science grade. Thus, using this composite, sophomore females consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

This Electronics composite prediction equation resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

Seniors 1984-85. This sample tested only for gender group differences. Using the Electronics composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of General Science course grade for these seniors.

### Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics composite within the prediction equation resulted in

statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .029 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Biology grade. Thus, using this composite, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

This Electronics composite equation also resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

<u>Freshmen 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .044 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

Sophomores 1984-85. Using the Electronics high school composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 and the Model 2 vs Model 5 comparisons. However, the Model 2 vs Model 6 comparsion showed that these two models were not significantly different. Model 6 included the unit vector, the Electronics score by sex two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 6 as the best prediction equation for this sample's Biology grade, no differential validity was evidenced for the ethnicity by Electronics score two-way interaction variables, with ethnicity being defined as White, Black and Hispanic group membership.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences

between the gender group members and an  $R^2$  change of .078 (p $\le$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .056 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

Juniors 1985-86. This sample tested only for gender group differences. Using the Electronics composite as the predictor variable resulted in statistically significant intercept differences for the gender groups. With an R<sup>2</sup> change of .058 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Biology course grade for these juniors. Using the Electronics composite as the predictor variable, junior females would be consistently una predicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Electronics composite in the equations resulted in statistically significant intercept differences for the gender members. With an  $\mathbb{R}^2$  change of .047 ( $p \le .01$ ) for the Model 8 vs Model 9

comparison, Model 8 would be the best prediction equations for these seniors. Using this composite, senior females would be consistently underpredicted in their Biology grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the Electronics composite as the predictor composite, the results showed statistically significant intercept differences in the prediction equations for the White and Black ethnic groups, with an  $R^2$  change of .040 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, White seniors would be consistently underpredicted in their Biology grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

# Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Electronics composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these freshmen.

<u>Sophomores 1984-85</u>. This sample also tested only for gender group differences. Again, with the Electronics composite in the equations, the results showed statistically significant intercept differences for the gender groups. With an  $\mathbb{R}^2$  change of .039 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 could be used in the prediction of Chemistry course grades obtained by these sophomores. Sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. This sample tested only for gender group differences. Using the Electronics composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an  $R^2$  change of .064 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Electronics composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .070 and .016 (p $\leq$ .01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, and 11 would be the best prediction equations for these Models 8 Using this composite, junior females would be juniors. consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Electronics composite as the aptitude measure were used in the prediction of Chemistry course grade, White juniors would be consistently underpredicted on this criterion while Nonwhite juniors would be consistently overpredicted.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .094 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results again showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics composite, the results showed no statistically significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

## Physics I - II

Juniors 1985-86. This sample tested only for gender group differences. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an R² change of .048 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, junior females would be consistently underpredicted in their Physics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. This sample tested only for gender group differences. The Electronics composite equations again resulted in statistically significant intercept differences for the gender groups. An  $\mathbb{R}^2$  change of .073 (p $\leq$ .01) for the Model 8 vs Midel 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

# Government and Civics

<u>Freshmen 1984-85</u>. This sample tested only for gender group differences. The Electronics composite prediction equations resulted in statistically significant intercept differences for the gender groups. Thus, with an  $R^2$  change of .017 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best predictor for this group's Government course grade. Freshmen females would be consistently underpredicted in their Government grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Sophomore 1984-85. This sample tested for gender group differences. Using the Electronics composite as the predictor variable, the results showed statistically significant intercept differences for the gender groups. An  $R^2$  change of .047 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this

Electronics composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .043 and .024 (p<.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Electronics composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

<u>Juniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, the use of this Electronics composite in the equations resulted in statistically significant intercept differences for only the With  $R^2$  change of .042 (p $\leq$ .01) for the Model 8 gender subgroup. vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

<u>Juniors 1985-86</u>. This sample, using the Electronics high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .049 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 was the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only

the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

<u>Seniors 1984-85</u>. Similar to some of the previous samples, using the Electronics composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With  $R^2$  change of .028 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these seniors. Using this composite, senior females would be consistently underpredicted in their Government grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When ethnic group differences were investigated using this composite, the results showed no statistically significant slope or intercept differences for the White and Black ethnic group members. Again, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

## History

Freshmen 1984-85. The use of the ASVAB Electronics composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .046 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

<u>Freshmen 1985-86</u>. This sample, using the Electronics high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .020 (p≤.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently

underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the Electronics high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .033 (p<.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

<u>Sophomores 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Electronics composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of History course grade for these sophomores.

Juniors 1984-85. Like the 1985-86 freshmen sample, this sample, using the Electronics high school composite score as the aptitude predictor variable, resulted in statistically

significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $\mathbb{R}^2$  change of .053 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics high school composite score as the aptitude predictor variable, the results showed statistically significant slope differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .013 (p≤.01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the History grade per unit change in the Flectronics high school composite was significantly different for freshmen males and females.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

At first, using this composite with this <u>Seniors 1984-85</u>. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including gender variables in the equations. The use of the Electronics composite in the prediction equations resulted in statistically significant intercept differences for the gender group members. An R? change of .026 (p≤.01) for the Model 8 vs Model 9 comparison was evidenced. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their History grades if the common regression line were used, while senior males would consistently overpredicted if a common regression line were used.

Statistically significant intercept differences also resulted between the White and Black ethnic subgroups. With an R2 change of .023 (p≤.01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Electronics composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

## Foreign Language

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of the ASVAB Electromics composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. The results showed an  $\mathbb{R}^2$  change of .077 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $\mathbb{R}^2$  change of .020 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Electronics composite within the equations, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .067 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, freshmen females would be

consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Electronics composite within the equations, the results showed statistically significant slope differences between the White, Black and Hispanic regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .010 ( $p \le .01$ ), with Model 10 being the best prediction equation for this sample's Foreign Language grade. Thus, the change in the Foreign Language grade per unit change in the ASVAB Electronics composite was significantly different for these White, Black and Hispanic freshmen.

At first, using this composite with this Sophomores 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black, and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Electronics composite within the equations, the results again showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .104 (p≤.01), with Model 8 being the best prediction equation for this sample's Thus, sophomore females would be Foreign Language grade. consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using of this Electronics composite in the prediction equations, the results also showed statistically significant intercept differences between the White, Black and Hispanic Again, the Electronics prediction equations regression lines. showed statistically significant intercept differences between the White, Black and Hispanic regression lines. The R2 change for the Model 11 and Model 12 comparison was approximately .011 (p<.01), with Model 11 being the best prediction equation for this sample's Foreign Language grade. White and Hispanic sophomores would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. Using the ASVAB Electronics composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .079 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample.

Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

At first, using this composite with this <u>Juniors 1984-85.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. of the Electronics composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .108 (p $\le$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the Electronics predictor composite also resulted in statistically significant intercept differences for the ethnic group members. The  $R^2$  change for the Model 11 vs Model 12 comparison was .023 (p $\leq$ .01); therefore, Model 11 would be the best prediction equation for these juniors' Foreign Language course grade. Using this composite White and Hispanic juniors would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Electronics prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .071 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be

consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

At first, using this composite with this <u>Seniors 1984-85.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, the Electronics prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .031 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language Thus, using this predictor composite, senior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The Electronics composite prediction equations resulted in no statistically significant slope or intercept differences for the two ethnic groups. Model 12 could be used in the prediction of Foreign Language course grade for these individuals.

### Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite ethnic group differences. Using the Electronics composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Electronics composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested only for White and Nonwhite ethnic group differences. Again, using the Electronics composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Electronics composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. in statistically Electronics prediction equations resulted significant intercept differences bet een the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .027  $\leq$  .(1), with Model 8 heing the best prediction equation for this sample's Typin, grade. using this predictor composite, fresharn remales would be consistently underpredicted in their Typingrade: 'f f a common regression line were used, while from males would be ssion line were t ed. consistently overpredicted if a commo reg

When testing for ethnic group differences, whe was of this ASVAB composite in the equations resulted in no new istical significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12 which contained only the unit vector and the Electronic composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by fresponent uring this school year.

Freshmen 1985-86. At first, using t's composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Electronics prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was .040  $(p \le .01)$ , with Model 8 being the best approximately prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied

by not including the gender variables in the equations. intercept . The R<sup>2</sup> results again showed statistically significant differences between the male and female regression lines. change for the Model 8 and Model 9 comparison was approximately .065 (p<.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The Electronics prediction equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .014 (p $\leq$ .01), with Model 7 being the best prediction equation for this sample's Typing grade. The change in the Typing grade per unit change in the Electronics high school composite was significantly different for sophomore males and females.

Using the Electronics composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Typing course grade for these sophomores.

<u>Juniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .090 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was .055  $(p \le .01)$ , with Model 8 being the best approximately prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Electronics composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Electronics composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .048 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

# Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB Electronics composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .067 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this

composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. This sample tested for gender Again, using the Electronics composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .137 (p $\le$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently if underpredicted in their Accounting grades the junior would regression line used, while males were consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. As in the previous sample, using the Electronics composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .058 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. Like the junior samples, this sample tested for gender group differences. Using the Electronics composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change of .067 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Home Economics

<u>Freshmen 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by at including the gender variables in the equations. The prediction equations with the ASVAB Electronics composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .062 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample.

Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Electronics composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $\mathbb{R}^2$  change of .066 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Electronics composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an  $R^2$  change of .079 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Electronics composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomore 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction with equations the ASVAB Electronics composite statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change .071 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Electronics composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An R2 change of .035 (p≤.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Electronics composite prediction equations resulted statistically significant intercept differences for the gender group members and resulted in an  $R^2$  change of .084 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Electronics composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Electronics composite prediction equations resulted statistically significant intercept differences for the gender group members and resulted in an  $R^2$  change of .046 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Electronics composite, the results showed no statistically significant slope or intercept differences in the

prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

<u>Juniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the Electronics composite equations, resulted in statistically significant intercept differences for the gender An  $\mathbb{R}^2$  change of .144 (p $\leq$ .01) for the Model 8 vs group members. Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Electronics composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

<u>Seniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the 1985-86 sample, the Electronics composite equations resulted in statistically significant intercept differences for An  $R^2$  change of .059 (p $\leq$ .01) was the gender group members. obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Electronics composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

#### Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Electronics composite as a predictor variable, the results showed statistically significant intercept

differences for the gender group members. An  $\mathbb{R}^2$  change of .104 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in thei. Computer Programming grades if the common regression line were 'sed, while sophomore males would be consistently overpredicted i. a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample tested for gender group differences. Again, using the Electronics composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .049 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. The model comparisons tested only for gender group differences. Usin the ASVAB Electronics predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .133 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. As in the previous Computer Programming samples, this sample tested for gender group differences. The Electronics composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Electronics composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 10.</u> Summary of Equity Findings for Prediction of High School Course Grades by Electronics High School Composite

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Course	}	Sex	Ethnicity	Sex*Ethnicity
English I-I	v		<del> </del> -	
Fresh	84-85	NS	NS	1 1
Fresh	85-86	1	E	l is
	84-85	Š	Ē	NS
Soph			1	NS NS
Soph	85-86	S		
ήr	84-85	S	E	NS
٦r	85-86	S	E	HS
\$r	84-85	I	E	NS
General Mat	th			
Fresh	84-85	1	E	NS NS
Fresh	85-86	E	Ε	l NS
Soph	84-85	Ē	E	NS
Soph	85-86	ī	Ε	NS
•				NS NS
٦̈٢	84-85	Ę	E	
٦L	85-86	Ī	E	NS
Sr	84-85	E	E	NS
Algebra				
Fresh	84-85	1	E	NS
fresh	35-86	i	Ē	NS
Soph	84-85	i	Ē	NS
	85-86	i	Ē	NS
Soph				]
٦̈L	84-85	1	E	NS NS
Jr	85-86	E	E	NS
Sr	84-85	1	S	NS
Geometry			1	
Fresh	85-86	1	E	NS
Soph	84-85	i	E	NS
Soph	85-86	i	s	NS
7L 20141	84-85	i	Ĕ	NS
Jr Jr	85-86	i	Š	NS
Jr Sr	84-85	Ë	, E	NS
			<del> </del>	
Calculus Jr	85-86	ξ	NT	NS
	0,700	<del></del> -	<del> </del>	
General Sc				
Fresh	84-85	NS	NS	1
fresh	85-86	E	٤	NS
Sooh	84-85	Ĭ	E	NS
Soph	85-86	1	E	NS
Jr	84-85	ε	1	NS
٦٢	85-86	ī	E	NS
Sr	84-85	Ē	NT	NS
Bioles		····	+	
Biology	ا ءء يم		-	
Fresh	84-85	Ţ	E	NS
Fresh	85-86	1	E	NS
Soph	84-85	\$	NS	1
Soph	85 - 86	ĭ	E	NS
Jr	84 - 85	ī	Ē	NS
Jr	85-86	i	NT NT	NS
		i	i i'	NS
Sr	84-85	1	1 1	l M2

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

<u>Table 10.</u> (Continued)

Course		Sex	Ethnicity	Sex*Ethnicit
Chemistry				
Fresh	85-86	Ε	NT	NS
Soph	84-85	ī	NT	NS
Soph	85-86	i	NT	NS NS
Jr	84-85	i	i	NS
Jr 31	85-86	i	E	NS
Sr Sr	84-85	Ę	٤	NS
		<del></del>		13
Physics				
٦r	85-86	1	NT	NS
Sr	84-85	1	NT	NS
Government				
Fresh	84 - 85	I	NT NT	NS NS
Soph	84-85	1	NT	NS
Soph	85-86	1	1	NS
Jr	84 - 85	1	E	NS
J٢	85 - 86	I	E	NS
Sr	84-85	1	E	NS
History		<del>-</del>		
Fresh	84-85	1	Ε	NS
Fresh	85-86	1	E	NS
Soph	84-85	Ī	E	NS
SOLAT	85-86	i	Ē	NS
Jr	84-85	i	Ē	NS
Jr	85-86	s S	Ē	NS
Sr	84 - 85	ĭ	ī	NS
			<del>-  </del>	
Foreign Lar				1
Fresh	84 - 85	į	I	NS
Fresh	85-86	i	s	NS
Soph	84 - 85	ı	1	NS
Soph	85-86	I	E	NS
٦٢	84-85	l	I	NS
٦r	85-86	1	E	i NS
Sr	84-85	i	E	NS
Secuctary &	Ofc			
10	85-86	NT	ε	NS
Sr	84-85	NT	E	NS
Typing				
Fresh	84 - 85	I	Ε	NS
Fresh	85-86	i	Ē	NS NS
Soph	84-85	i	Ē	NS
Soph	85-86	Š	Ē	NS
7L 20Hu	84-85	1	Ē	
	85-86		-	NS
Jr Sr	84-85	I I	E NT	NS NS
				<del>                                     </del>
Accounting	95 97	•		
Soph	85-86	1	NT	NS
٦r	84 - 85	I .	NT	NS
٦r	85 - 86	Į.	NT	l NS
Sr	84 - 85	1	NT NT	Nc

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 10. (Concluded)

Course		Sex	Ethnicity	3ex*Ethnicity
Home Econor	mics			
Fresh	84 - 85	1	1	NS
fresh	85-86	1	E	NS
Soph	84-85	I	1	NS
Soph	85-86	1	E	NS
Jr.	84-85	1	E	NS
Jr	85-86	1	E	NS
Sr	84-85	1	E	NS
Computer P	rogram	· · · · · · · · · · · · · · · · · · ·		
Soph	85-86	1	NT	NS
Jr	84 - 85	1	NT	NS
٦٢	85 86	1	NT	NS
Sr	84 - 85	Ε	NT	NS NS

Note. NS = Not significant; 1 = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

# Health, Social and Technical High School Composite

# English I - IV

Freshmen 1984-85. Using the Health high school composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Health composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's English grade, no differential validity was evidenced for the ethnicity by Health score two-way interaction variables or the sex by Health score two-way interaction variables.

<u>Freshmen</u> 1985-86. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .048 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using this ASVAB composite resulted in no statistically significant slope or intercept differences among the White, Black and Hispanic regression lines. Thus, Model 12,

which contained the unit vector and the Health high school composite score, could be used in the prediction of English grades obtained by freshmen during this school year.

<u>Sophomores 1984-85</u>. When the model comparisons were made for gender group differences, using the Health composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .010 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Health composite was significantly different for this year's sophomore males and females.

Using this composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

<u>Sophomores 1985-86</u>. The model comparisons for gender group differences using the Health high school composite showed statistically significant slope differences between the male and female regression lines, with Model 7 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .010 (p $\leq$ .001). Thus, the change in the English grade per unit change in the ASVAB Health composite was significantly different for these sophomore males and females.

Statistically significant intercept differences resulted among the White, Black and Hispanic ethnic subgroups. With an  $R^2$  change of .009 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Health composite were used in the prediction of English course grade, White and Hispanic sophomores would be consistently underpredicted on the criterion while Black sophomores would be consistently overpredicted.

<u>Juniors 1984-85</u>. When the model comparisons were made for gender group differences, using the Health high school composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .009 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Health composite was significantly different for these junior males and females.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hispanic juniors.

Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of English course grade for these individual.

<u>Juniors 1985-86</u>. As in the 1984-85 school year, using the Health high school composite in the equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .009 (p $\leq$ .001), with Model 7 being the best prediction equation for English grade. Thus, the change in the English grade per unit change in the ASVAB Health composite was also significantly different for these junior males and females.

Again, using this composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. This sample, using the Health high school composite score as the aptitude predictor variable, showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $R^2$  change of .043 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Model 12, containing only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of English course grade for these seniors.

#### General Math

Freshmen 1984-85. This sample, using the Health high school composite score as the aptitude predictor variable, showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .012 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable freshmen females would be consistently underpredicted in their General Math grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Model 12, containing only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Freshmen 1985-86. For this sample, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Models 9 or 12, containing only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Health composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .042 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Health composite were used in the prediction of General Math course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the Health composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the Health high school composite score as the aptitude predictor variable, showed no statistically significant slope or intercept differences for the gender or White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1934-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Health high school composite score as the aptitude predictor variable, showed

statistically significant intercept differences between the male and female gender subgroups. With an R<sup>2</sup> change of .040 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Health composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently overpredicted.

Using the Health composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12, containing the unit vector and the Health composite score, could be used in predicting General Math course grade for these individuals.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

#### Algebra

Freshmen 1984-85. Using the ASVAB Health composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .057 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the Health composite, the results showed no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

<u>Freshmen 1985-86</u>. With the Health composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in  $R^2$  changes of .058 (p $\leq$ .001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. Using

this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

In this 1984-85 sample, using the Health Scphomores 1984-85. high school composite score as the aptitude predictor variable, results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .036 (p $\leq$ .001) for the Model 8 vs Model 9 Therefore, Model 8 would be the best prediction comparison. Using this composite, sophomore equation for this sample. females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

<u>Sophomores 1985-86</u>. In this sample, using the Health high school composite, the results also showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .026 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Health composite as the predictor resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

Juniors 1984-85. In this 1984-85 sample, using the Health high school composite score as the aptitude predictor variable, the results showed statistically significant intercept

differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .047 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for these juniors.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .050 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these Using this composite, senior females would consistently underpredicted in their Algebra grades if the common regression line were used, while senior males would consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12 could be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

### Geometry

<u>Freshmen 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the

White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted in an  $\mathbb{R}^2$  change of .019 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Geometry grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the Health composite in the prediction equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

<u>Sophomores 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .024 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the Health composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

At first, using this composite with this Sophomores 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Health composite aptitude measure, the results showed statistically the significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .045 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Health composite within the equations, the results showed statistically significant slope differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for

the Model 10 and Model 11 comparison was approximately .015 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB Health composite was significantly different for these White and Black sophomores.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by including the gender variables in the equations. With the Health composite as the aptitude measure, the results statistically significant intercept differences for the gender group members. With an  $R^2$  change of .041 (p $\le$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. females consistently composite, sophomore would be underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the Health composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Health composite as the aptitude measure, the results showed no statistically significant slope or intercept differences for the gender group members. Thus, Model 9 could be used in the prediction of Geometry course grades obtained by juniors during the 1985-86 school year.

When the model comparisons were made for ethnic group differences using the Health composite, the results showed statistically significant slope differences for the gender group members. With an  $R^2$  change of .043 (p $\leq$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation for Geometry course grade for these juniors. The change in the Geometry grade per unit change in the ASVAB Health composite was significantly different for these White and Nonwhite juniors.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Health composite equations resulted in no statistically

significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

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## Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The Health composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

## General Science

Freshmen 1984-85. Using the Health high school composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Health composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by Health score two-way interaction variables or the sex by Health score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12, which contained the unit vector and the Health composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

Sophomores 1984-85. In this 1984-85 sample, using the Health high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .051 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed statistically significant intercept differences for the gender group members. These tests resulted in an R<sup>2</sup> change of .035 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Health composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Model 12, which contained the unit vector and the Health composite score, could be used in the prediction of General Science course grades obtained by sophomores in 1985-86.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite within the prediction equation resulted in no statistically significant slope or intercept differences between the male and female regression lines. Again, Model 9 could be used in the prediction of General Science course grades obtained by juniors in this school year.

When the model comparisons were made for ethnic group differences, using the Health composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .053 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White sophomores would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

At first, using this composite with this <u>Juniors 1985-86</u>. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was  $(p\leq .01)$ , with Model 8 being the best .027 approximately prediction equation for this sample's General Science grade. using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

..is Health composite prediction equation resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the Health composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Math composite, could be used in the prediction of General Science course grade for these seniors.

# Biology I - II

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Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .030 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Biology grade. Thus, using this composite, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

This Health composite equation also resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

<u>Freshmen 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .043 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

<u>Sophomores 1984-85</u>. The use of this composite with this sample also resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .018 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the Health composite as the predictor composite, the results showed statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups, with an  $\mathbb{R}^2$  change of .017 (p $\leq$ .001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, Black and Hispanic sophomores would be consistently underpredicted in their Biology grades if the common regression line were used, while White sophomores would be consistently overpredicted if a common regression line were used.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences between the gender group members and an  $R^2$  change of .069 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted

in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $\mathbb{R}^2$  change of .048 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

This sample tested only for gender group Juniors 1985-86. Using the Health composite as the predictor differences. statistically significant in variable resulted differences for the gender groups. With an R2 change of .068 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Biology course grade for these Using the Health composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Health composite in the equations resulted in statistically significant intercept differences for the gender members. With an  $R^2$  change of .050 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equations for these seniors. Using this composite, senior females would be consistently

underpredicted in their Biology grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

or ethnic group differences were conducted When the tests using the Health composite as the predictor composite, the results showed statistically significant intercept differences in the prediction equations for the White and Black ethnic groups, with an  $R^2$  change of .039 (p $\leq$ .01) for the Model 11 vs Model 12 Therefore, Model 11 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, White seniors would be consistently underpredicted in their Biology grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

# Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Health composite in the equations, the results showed statistically significant intercept differences for the gender groups. With an  $R^2$  change of .046 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Chemistry course grade for these freshmen. Using the Health composite as the predictor variable, freshmen females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. This sample also tested only for gender group differences. Again, with the Health composite in the equations, the results showed statistically significant intercept differences for the gender groups. With an  $R^2$  change of .040 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 could be used in the prediction of Chemistry course grades obtained by these sophomores. Sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. Using the Health composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an  $R^2$  change of .059 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Health composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With R<sup>2</sup> changes of .072 and .016 (p≤.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these Using this composite, junior females would consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Health composite as the aptitude measure were used in the prediction of Chemistry course grade, White juniors would be consistently underpredicted on this criterion while Nonwhite juniors would be consistently overpredicted.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^Z$  change of .081 (p<.01) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison. prediction equation for this sample. Using the Health composite as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results again showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite, the results showed no statistically significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

# Physics I - II

Juniors 1985-86. This sample tested only for gender group differences. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .051 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, junior females would be consistently underpredicted in their Physics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. This sample tested only for gender group differences. The Health composite equations again resulted in statistically significant intercept differences for the gender groups. An  $R^2$  change of .071 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

# Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The Health composite prediction equations resulted in statistically significant intercept differences for the gender groups. Thus, with an  $R^2$  change of .020 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best predictor for this group's Government course grade. Freshmen females would be consistently underpredicted in their Government grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Sophomore 1984-85. This sample also tested for gender group differences. Using the Health composite as the predictor variable, the results showed statistically significant intercept differences for the gender groups. An  $R^2$  change of .045 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not

including the gender variables in the equations. The use of this Health composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .040 and .022 (p $\leq$ .01) for the Model 8 vs Model 5 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Health composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, the use of this Health composite in the equations resulted in statistically significant intercept differences for only the gender subgroup. With  $R^2$  change of .039 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Juniors 1985-86. This sample, using the Health high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .049 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 was the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only

the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Seniors 1984-85. Similar to some of the previous samples, using the Health composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With  $R^2$  change of .024 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these seniors. Using this composite, senior females would be consistently underpredicted in their Government grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When ethnic group differences were investigated using this composite, the results showed no statistically significant slope or intercept differences for the White and Black ethnic group members. Again, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

## <u>History</u>

Freshmen 1984-85. The use of the ASVAB Health composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .050 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common 1 gression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the Health high school composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .021 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History

grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the Health high school composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .034 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

<u>Sophomores 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Health composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Statistically significant intercept differences also resulted between the White, Black and Hisparic ethnic subgroups. With an  $\mathbb{R}^2$  change of .009 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Health composite as the aptitude measure were used in the prediction of History course grade, White and Hispanic sophomores would be consistently underpredicted on this criterion while Black sophomores would be consistently overpredicted.

Like the 1985-86 freshmen sample, this Juniors 1984-85. sample, using the Health high school composite score as the variable, predictor resulted aptitude in statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R<sup>2</sup> change of .054 (p≤.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

<u>Juniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Health high school composite score as the aptitude predictor variable, results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .055 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Health composite in the prediction equations resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .019 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the

predictor variable, senior females would be consistently underpredicted in their History grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Statistically significant intercept differences also resulted between the White and Black ethnic subgroups. With an R<sup>2</sup> change—of .025 (p≤.01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Health composite as the aptitude—measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

## Foreign Language

At first, using this composite with this Freshmen 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. of the ASVAB Health composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. results showed an R<sup>2</sup> change of .073 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $R^2$  change of .016 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Health composite within the equations, the results showed

statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .059 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Health composite within the equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. composite predictor equations showed statistically significant intercept differences between the male and female The R2 change for the Model 8 and Model 9 regression lines. comparison was approximately .105 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language Thus, using this composite as the aptitude measure, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the use of this Health composite in the prediction equations resulted in no statistically significant slope or intercept differences for the ethnic group members. Therefore, Model 12, which contained the unit vector and the Health composite, could be used in the prediction of these sophomores' Foreign Language course grade.

<u>Sophomores 1985-86</u>. Using the ASVAB Health composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .074 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Again, Model 12 could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of the Health composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .100 (p $\le$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the Health predictor composite also resulted in statistically significant intercept differences for the ethnic group members. The  $\mathbb{R}^2$  change for the Model 11 vs Model 12 comparison was .020 (p $\leq$ .01); therefore, Model 11 would be the best prediction equation for these juniors' Foreign Language course grade. Using this composite White and Hispanic juniors would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Health prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .071 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained

only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, the Health prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 8 and Model 9 comparison was approximately .031 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The Health composite prediction equations resulted in no statistically significant slope or intercept differences for the two ethnic groups. Model 12 could be used in the prediction of Foreign Language course grade for these individuals.

# Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite ethnic group differences. Using the Health composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Health composite, could be used in the prediction of this course grade for these juniors.

<u>Seniors 1984-85</u>. This sample also tested only for White and Nonwhite ethnic group differences. Again, using the Health composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Health composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

#### Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Health prediction equations resulted in statistically significant intercept differences between the male and female regression

lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .020 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Health prediction equations resulted in statistically significant intercept differences between the male and female regression The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .043 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. intercept results again showed statistically significant differences between the male and female regression lines. change for the Model 8 and Model 9 comparison was approximately .059 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The Health prediction equations showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .022 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Health composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .093 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .060 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Health composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Seniors 1984-85. This sample tested only for gender group differences. The Health composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .040 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB Health composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .068 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. This sample also tested only for gender group differences. Again, using the Health composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .129 (p<.01) for the Model

8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested for gender group differences. As in the previous sample, using the Health composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R<sup>2</sup> change of .051 (p..01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. Like the junior samples, this sample tested only for gender group differences. Using the Health composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .057 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Home Economics

Freshmen 1984-85. At firs using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Health composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an R2 change of .058 ( $p \le .01$ ) for the Model 8 vs Model 5 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using freshmen females would be consistently composite, underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Health composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $\mathbb{R}^2$  change of .071 (p<sub>1</sub>.01) for the Model 11 vs Model 12 comparison was evidenced;

and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Health composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an  $R^2$  change of .079 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Health composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

At firs, using this composite with this Sophomore 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Health composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $\mathbb{R}^2$  change of .078 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Health composite, the results showed statistically significant intercept differences in the prediction equation for the two ethnic groups. An R<sup>2</sup> change of .033 (25.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor

composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Sophomores 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Health composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $\mathbb{R}^2$  change of .077 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Health composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Health composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $\mathbb{R}^2$  change of .045 (p $\leq$ .01) for the Model 8 vs Therefore, Model 8 would be the best 9 comparison. prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Health composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

<u>wuniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this

sample, using the Health composite equations, resulted in statistically significant intercept differences for the gender group members. At  $\mathbb{R}^2$  change of .139 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Health composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Health composite equations resulted in statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .058 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Health composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

### Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Health composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An R<sup>2</sup> change of .104 (p≤.01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, where sophomore males would be consistently overpredicted if a common regression line were used.

Junions 1984-85. Like the sophomore sample, this sample tested for gender group differences. Again, using the Health composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An R<sup>2</sup> change of .052 (p≤.01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. The model comparisons tested only for gender group differences. Using the ASVAB Health predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .150 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample tested for gender group differences. The Health composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Health composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 11</u> Summary of Equity Findings for Prediction of High School Course Grades by Health, Social & Technical Composite

Course		Sex	Ethnicity	Sex*Ethnicity	
English 1-	IV				
Fresh	84-85	NS	NC	1	
Fresh	85-86	1	E	NS	
Soph	84-85	\$	E	NS	
Soph	85-86	3	1	NS	
Jr	84 - 85	8	E	NS	
J۲	85-86	8	E	- NS	
8r	84-85	1	E	NS	
General Ma	th				
fresh	84-85	1	E	NS	
Fresh	85 - 86	E	E	HS	
Soph	84 - 85	Ε	E	MS	
Soph	85-86	1	E	NS	
Jr.	84-85	E	f	NS	
J٢	85-86	1	E	MS	
Sr	84 - 85	E	£	NS	

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to smell sample sizes.

Table 11. (Continued)

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	Course	. 1	Sex	Ethnicity	Sex*Ethnicity
	Machae				
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	Soph	84-85	1	E	NS
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	General Sci				} .
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·	Soph	85-86	I	E	l NS
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	Jr	84 - 85	1	E	l NS
	Jr	85-86	1	NT	NS .
i	\$r	84-85	Ī	1	NS
* ***	·				
}	Chemistry	i		1	1
	Fresh	85-86	1	NT NT	NS
	Soph	84-85	i	NT	NS
1				•	
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•	Fresh	84 - 85	1	NT	NS
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	\$r	84-85	1	E	NS

Note. MS = Not significant; I = Intercept differences; b = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 11. (Concluded)

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Note. NS = Not significant; 1 = Intercept differences; 8 = \$lope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

## AFOT Selector Composite

## English I - IV

Freshmen 1984-85. Using the AFQT selector composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the AFQT composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's English grade, no differential validity was evidenced for the ethnicity by AFQT score two-way interaction variables or the sex by AFQT score two-way interaction variables.

Freshmen 1985-86. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .033 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the AFQT composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic freshmen which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of English course grade for these freshmen.

Sophomores 1984-85. When the model comparisons were made for gender group differences, using the AFQT selector composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\leq$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB AFQT composite was significantly different for this year's sophomore males and females.

Using the AFQT composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

<u>Sophomores 1985-86</u>. The model comparisons for gender group differences using the AFQT selector composite showed statistically significant slope differences between the male and female regression lines, with Model 7 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\leq$ .001). Thus, the change in the English grade per unit change in the ASVAB AFQT composite was significantly different for these sophomore males and females.

Using the AFQT composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

Juniors 1984-85. When the model comparisons were made for gender group differences, using the AFQT selector composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB AFQT composite was significantly different for these junior males and females.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hispanic juniors. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of English course grade for these individuals.

Juniors 1985-86. As in the 1984-85 school year, using the AFQT selector composite in the equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\leq$ .001), with Model 7 being the best prediction equation for English grade. Thus, the change in the English grade per unit change in the ASVAB AFQT composite was also significantly different for these junior males and females.

Again, using the AFQT composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. The ASVAB AFQT composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $\mathbb{R}^2$  change of .026 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the aptitude predictor variable senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

# General Math

Freshmen 1984-85. This sample, using the AFQT ASVAB composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Thus, Models 9 or 12, which contain only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of General Math course grades obtained by freshmen during this school year.

Freshmen 1985-86. As in the 1984-85 sample, the results showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Black. Again, Models 9 or 12 containing only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

<u>Sophomores 1985-86</u>. This sample, using the AFQT composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .035 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the AFQT composite were used in the prediction of General Math course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the AFQT composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the AFQT selector composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of General Math course grades obtained in 1985-36 by juniors.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

### Algebra

<u>Freshmen 1984-85</u>. Using the ASVAB AFQT composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups with an  $R^2$  change of .037 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Freshmen 1985-86. With the AFQT composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in  $R^2$  change of .038 (p $\leq$ .001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Sophomores 1984-85. In this 1984-85 sample, using the AFQT selector composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of .022 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

Sophomores 1985-86. This sample resulted in no statistically significant slope or intercept differences for the gender group or the White and Nonwhite ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the AFQT composite score in the prediction equations, could be used in the prediction of Algebra course grade for these sophomores.

In this 1984-85 sample, using the AFOT Juniors 1984-85. selector composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an R2 change of .027 (p≤.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this Using this junior females sample. composite, would consistently underpredicted in their Algebra grades if the common were used, regression line while junior males consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the AFQT composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the AFQT composite in the equations resulted in statistically significant intercept differences for the gender group members. With an R<sup>2</sup> change of .035 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these seniors. Using this composite, senior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12 cruld be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, using the AFQT composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Model 9 or 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

<u>S.phomores 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. As in the Freshmen sample, using the AFQT composite resulted in no statistically significant slope of intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the AFQT composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .021 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the AFQT composite within the equations, the results showed statistically significant slope differences between the White and Black regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .025 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB AFQT composite was significantly different for these White and Black sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the AFOT results as the aptitude measure, the statistically significant intercept differences for the gender group members. With an  $R^2$  change of .019 (p $\le$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these juniors. Using this composite, junior females would be consistently underpredicted in their Geometry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using the AFQT composite resulted in no statistically significant slope or intercept differences for the two ethnic groups. Again, Model 12 could be used in the prediction of Geometry course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in some of the other Geometry samples, using the AFQT composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Geometry course grade for these juniors.

When the model comparisons were made for ethnic group differences, using the AFQT composite, the results showed statistically significant slope differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .059 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB AFQT composite was significantly different for these White and Nonwhite juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the AFQT composite equations also resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

### Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The AFQT composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

## General Science

Freshmen 1984-85. Using the AFQT selector composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the AFQT composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by AFQT score two-way interaction variables or the sex by AFQT score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the AFQT composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender groups. Model 9, which contained the unit vector and the AFQT composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

When the model comparisons were made for ethnic group differences, using the AFQT composite, the results showed statistically significant slope differences between the White and Black regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .032 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's General Science grade. Thus, the change in the General Science grade per unit change in the ASVAB AFQT composite was significantly different for these White and Black freshmen.

Sophomores 1984-85. In this 1984-85 sample, using the AFQT selector composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .033 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if

the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the AFQT composite as the aptitude aptitude measure resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of General Science course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the AFQT composite within the prediction equation resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Science course grade for these juniors.

With the AFQT composite as the aptitude measure, the results showed statistically significant intercept differences for the two ethnic subgroups. With an  $R^2$  change of .055 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for General Science course grade for these juniors. Using this composite, White juniors would be consistently underpredicted in their General Science grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This AFQT composite prediction equation resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. As in some of the previous samples, Model 9 or 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the AFQT composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB AFQT composite, could be used in the prediction of General Science course grade for these seniors.

## Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This AFQT composite equation also resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Biology course grades obtained by freshmen in 1985-86.

<u>Freshmen 1985-86</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .026 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

Sophomores 1984-85. Using the AFQT selector composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 and the Model 2 vs Model 5 comparisons. However, the Model 2 vs Model 6 comparsion showed that these two models were not significantly different. Model 6 included the unit vector, the AFQT score by sex two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variable. With Model 6 as the best prediction equation for this sample's Biology grade, no differential validly was evidenced for the ethnicity by AFQI score two-way interaction variables, with ethnicity being defined as White, Black and Hispanic group membership.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences between the gender group members and an R° change of .048 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .030 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAR composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. Using the AFQT composite as the predictor variable resulted in statistically significant intercept differences for the gender groups. With an  $R^2$  change of .032 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Biology course grade for these juniors. Using this composite, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this AFQT composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group With  $R^2$  changes of .028 and .035 (p $\le$ .01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these seniors. Using this composite, senior females would be consistently underpredicted in their Biology grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used. Conversely. if a common regression line using the AFQT composite as the aptitude measure were used in the prediction of Biology course grade, White seniors would be consistently underpredicted on this Black seniors would criterion while be consistently overpredicted.

# Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the AFQT composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB AFQT composite, could be used in the prediction of Chemistry course grades obtained by freshmen in this year.

Sophomores 1984-85. This sample also tested only for gender group differences. Again, with the AFQT composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Chemistry course grades obtained by these sophomores.

Sophomores 1985-86. This sample tested only for gender group differences. Using the AFQT composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an  $R^2$  change of .043 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this AFQT composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .045 and .029 (p≤.01) for the

Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these juniors. Using this composite, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the AFQT composite as the aptitude measure were used in the prediction of Chemistry course grade, White juniors would be consistently underpredicted on this criterion while Nonwhite juniors would be consistently overpredicted.

At first, using this composite with this <u>Juniors 1985-86.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .058 (p $\le$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

<u>Seniors 1984-85</u>. As in the previous samples using the AFQT composite, the results showed no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

When the model comparisons were made for ethnic group differences, using the AFQT composite, the results showed statistically significant slope differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .039 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Chemistry grade. Thus, the change in the Chemistry grade per unit change in the ASVAB AFQT composite was significantly different for these write and Nonwhite seniors.

## Physics I - II

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .038 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the predictor variable, junior females would be consistently underpredicted in their Physics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. This sample tested only for gender group differences. The AFQT composite equations again resulted in statistically significant intercept differences for the gender groups. An  $R^2$  change of .034 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

## Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The AFQT composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB AFQT composite, could be used in the prediction of Government course grades obtained by freshmen for this year.

Sophomore 1984-85. This sample also tested for gender group differences. Again, using the AFQT composite as the predictor variable, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Government course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this AFQT composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .028 and .015 (p $\leq$ .01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the

common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the AFQT composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, the use of this AFQT composite in the equations resulted in statistically significant intercept differences for only the gender subgroup. With R² changes of .016 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Juniors 1985-86. This sample, using the AFQT selector composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .026 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 was the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

<u>Seniors 1984-85</u>. Similar to the previous samples, this sample, using the AFQT composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Again, Models 9 or 12, which

contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

## History

Freshmen 1984-85. The use of the ASVAB AFQT composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of 030 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the AFQT selector composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .007 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the AFQT selector composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .016 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their

History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

Sophomores 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .035 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the AFQT composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed statistically significant slope differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .009 (p $\leq$ .001), with Model 10 being the best prediction equation for this sample's History grade. Thus, the change in History grade per unit change in the AFQT composite was significantly different for White, Black and Hispanic sophomores.

<u>Juniors 1984-85.</u> Like the 1985-86 freshmen sample, this sample, using the AFQT selector composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .028  $(p \le .001)$  for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common would regression line were used, while junior males consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the AFQT composite score as the aptitude predictor variable, the results showed statistically significant slope differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .013 (p≤.01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. Thus, the change in the History grade per unit change in the AFQT composite was significantly different for junior males and females.

Using the AFQT composite predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of History course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, the use of the AFQT composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of History course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $R^2$  change of .023 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the AFQT composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

## Foreign Language

Freshmen 1984-85. The use of the ASVAB AFQT composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .052 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, will freshmen males would be consistently overpredicted if a connection of the common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $\mathbb{R}^2$  change of .025 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude p dictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. the AFQT composite in the prediction equations the results showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .045 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Forcign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $R^2$  change of .011 (p<.01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The AFQT prediction equations showed statistically significant intercept differences between the male and female regression lines. The R<sup>e</sup> change for the Model 8 and Model 9 comparison was approximately .081 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this composite as the aptitude measure, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sopnomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the use of this AFQT composite in the prediction equations also resulted in statistically significant intercept differences for the ethnic group members. With an  $R^2$  change of .015 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system for these sophomores' Foreign Language course grade. Again, using this composite as the aptitude measure, White and Hispanic sophomores would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

<u>Sophomores 1985-86</u>. Using the ASVAB AFQT composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .059 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using of this AFQT composite in the prediction equations, the results also showed statistically significant intercept differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .019 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Foreign Language grade. White sophomores would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. of the AFQT composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The  ${\rm R}^2$  change for the Model 8 and Model 9 comparison was approximately .076 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language Thus, using this predictor composite, junior females grade. would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the General predictor composite also resulted in statistically significant intercept differences for the ethnic group members. The  $R^2$  change for the Model 11 vs Model 12 comparison was .024 (p $\leq$ .01); therefore, Model 11 would be the best prediction equation for these juniors' Foreign Language course grade. Using this composite White and Hispanic juniors would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The General prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .046  $(p \le .01)$ , with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the rediction equation, could be used in the prediction of Foreign auage course grades obtained by juniors during this school years.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The AFQT composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Foreign Language course grade for these individuals.

## Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwi te ethnic group differences. Using the AFQT composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the

gender groups. Thus, Model 12, which contained the unit vector and the ASVAB AFQT composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested for White and Nonwhite ethnic group differences. Again, using the AFQT composite prediction equations the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 12, which contained the unit vector and the ASVAB AFQT composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

## Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The AFQT composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Typing course grade for these freshmen.

A' first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The AFOT prediction equations resulted statistically significant in intercept differences between the male and female regression The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .032  $(p \le .01)$ , with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The results again showed statistically significant intercept

differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 8 and Model 9 comparison was approximately .039 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the AFQT composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .063 (p≤.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .040 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the AFQT composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Seniors 1984-85. This sample tested only for gender group differences. The AFQT composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .029 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

# Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB AFQT composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .049 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. This sample tested for gender group differences. Again, using the AFQT composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $\mathbb{R}^2$  change of .087 (p $\leq$ .01) for the Model

8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the junior females would be variable, consistently underpredicted in their Accounting grades ìf the regression line junior males were used, while would consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. This sample tested for gender group differen os. As in the previous sample, using the AFQT composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .034 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. Like the junior samples, this sample tested gender group differences. Using the AFQT composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change of .034 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB AFQT composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an R2 change of .042 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using freshmen females would be consistently composite, underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB AFQT composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. Ar  $R^2$  change of .069 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could

be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the AFQT composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an  $R^2$  change of .058 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB AFQT composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomore 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB AFQT composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .056 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB AFQT composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $\mathbb{R}^2$  change of .031 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor composite, White sophomores would be consistently underpredicted in their Home

Economics grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were stated by not AFQT composite prediction equations resulted in tatistically significant intercept differences for the gende way members. composite showed statistically significant AFOT intercept differences in the prediction equations for the two sophomore gender groups and resulted in an R<sup>2</sup> change of .058 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB AFQT composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the AFQT composite prediction equations resulted in statistically significant intercept differences for the gender group members. ASVAB AFQT composite showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .027 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB AFQT composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the AFQT composite equations, resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .108 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB AFQT composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the AFQT composite equations resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .039 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB AFQT composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

#### Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the AFQT composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $R^2$  change of .070 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be

consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample tested for gender group differences. Again, the AFQT composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB AFQT composite, could be used in the prediction of Computer Programming course grades obtained by juniors for this year.

<u>Juniors 1985-86</u>. The model comparisons tested only for gender group differences. Using the AFQT predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .094 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample also tested for gender group differences. The AFQT composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB AFQT composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 12.</u> Summary of Equity Findings for Prediction of High School Course Grades by AFQT Selector Composite

Course		Sex	Ethnicity	Sex*Ethnicity
English I-	IV			
fresh	84-85	NS	NS	i
Fresh	85-86	I	E	NS
Seph	84-85	S	E	NS
Soph	85-86	S	E	NS
J۲	84-85	S	E	NS
٦r	85-86	S	E	NS NS
Sr	84-85	1	E	NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 12. (Continued)

Course		Sex	Ethnicity	Sex*Ethnicity
General Mat	h			
Fresh	84-85	E	E	NS
Fresh	85-86	Ē	Ē	NS
Soph	84-85	È	Ē	NS
Soph	85-86	i	Ē	NS
Jr Jr	84-85	É	E	HS
76	85 86		E	
3r Sr	84-85	I E	E	NS NS
		<del></del> -		
Algebra Fresh	84-85	1	E	NS
Fresh	85-86	i	Ē	NS
	84-85		ξ	NS NS
Soph		1		2
Soph	85-86	E	E	NS NS
٦̈́L	84-85	Ī	E	NS
٦r	85-86	E	E	NS
\$r	84 - 85	I	E	NS
Geometry				
fresh	85-86	E	E	NS NS
Soph	84-85	Ē	E	NS
Soph	85 86	ī	Š	NS
Jr.	84-85	i	Ĕ	NS
1 2,	85-86	Ė	S	NS
Sr	84-85	E	E	NS NS
Calculus			<del></del>	<del>  -</del>
Jr	85-86	E	NT	NS
General Sc	ence			-
Fresh	84-85	NS	NS	1
Fresh	85-86	Ë	s	NS
Soph	84-85	ī	Ě	NS
Soph	85-86	Ė	Ē	NS
Jr	84 - 85	Ē	i	NS
J:	85-86	Ē	Ė	NS
Sr Sr	84-85	E	NT	HS
			_	1
Biology	9/ 95	-	_	
Fresh	84 - 85	E	E	NS
Fresh	85 - 86	I	€	NS
Soph	84 - 85	\$	NS	1
Soph	85-86	I	E	NS
٦r	84 - 85	1	} E	NS
Jr	85 - 86	1	NT	NS
\$r	84 - 85	1	t	NS
Chemistry				<del> </del>
Fresh	85-86	E	NT	NS
Soph	84-85	E	NT	NS
	85-86	l	1	
Soph			NT	NS
٦̈́L	84 - 85	1	1	NS
J٢	85-86	I .	E	KS
\$r	84 - 85	E	s	, NS

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NI = Not tested due to small sample sizes.

Table 12. (Concluded)

Course		Sex	Ethnicity	Sex*Ethnicity
			-	
Physics	05 04			
٦r	85-86	ţ	NT	NS
\$r	84-85		NT	NS
Government				
Fresh	84 - 85	E	NT NT	NS NS
Soph	84 - 85	E	NT	NS NS
Soph	85-86	I	1	NS
Jr	84-85	I	E	NS
٦٢	85-86	1	E	NS
\$r	84-85	E	E	NS
History		<del></del>		
Fresh	84-85	1	E	NS NS
Fresh	85-86	i	È	NS NS
Soph	84-85	1	Ē	NS
•			S	4
Soph	85-36	1		NS NS
jı	84-85	1	E	NS
J٢	85-86	S	E	NS NS
Sr	84 - 85	E	I	RS
Foreign Lan	guage			
Fresh	84-85	1	1	NS
Fresh	85 - 86	i	1	NS
Soph	84 - 85	1	1	NS
Soph	85-86	i	1	NS
Jr.	84-85	i	i	NS
Jr	85-86	i	Ė	NS
\$r	84 - 85	Ë	E	NS
Secretary 8	Ofc		1	
Jr	85-86	NT	Ε	NS
Sr	84-85	NT	Ē	NS
Typica			+	1
Typing Fresh	84-85	c	E	NS
		E		
Fresh	85 - 86	1	E	NS
Soph	84-85	<u>I</u>	E	NS
Soph	85-86	E	Ε	NS
٦r	84 - 85	1	E	NS
J٢	85-86	I	E	NS
2ı.	84 - 85	1	NT	NS
Accounting				
Soph	85-86	1	NT	NS
٦٢	84 - 85	1	NT	NS
76	85-86	1	NT	NS
Sr	84 - 85	i	NT	NS
Home Econor	nics		<del></del>	
Fresh	84-85	1	1	NS
			E	I
Fresh	85-86	1	L	NS NS
Soph	84 - 85	1	1	NS NS
Soph	85-86	I	E	NS
Jr	84-85	I	E	NS
٦٢	85-86	1	E	NS
\$1	84-85	1	E	NS
Computer P	rogram			
Soph	85-86		NT	NS
Jr Jopan	84-85	Ė	NT	NS
Jr	85-86	ī	NT	NS
\$r	84-85	Ė	NT NT	NS
	2000 - CO -			. 43

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NI = Not tested due to small sample sizes.

# Perceptual Speed Composite

### English I - IV

Freshmen 1984-85. Using the Perceptual Speed composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 comparison. However, the Model 2 vs Model 5 comparsion showed that these two models were not significantly different. Model 5 included the unit vector, the Perceptual score by ethnicity two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 5 as the best prediction equation for this sample's English grade, no differential validiy for the gender by Perceptual score two-way interaction predictor variables was evidenced.

Freshmen 1985-86. Using the Perceptual Speed composite with this sample, the results again showed statistically significant differences between the Model 2 vs Model 4 comparison. However, the Model 2 vs Model 5 comparsion showed that these two models were not significantly different. Model 5 included the unit vector, the Perceptual score by ethnicity two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 5 as the best prediction equation for this sample's English grade, no differential validiy for the gender by Perceptual score two-way interaction predictor variables was evidenced.

Sophomores 1984-85. When the model comparisons were made for gender group differences, using the Perceptual composite resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .015 (p1.001), with Model 8 being the best prediction equation for this group's English grade. Thus, using the Perceptual composite as the predictor variable sophomore females would be consistently underpredicted in their English grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White, Black and Hispanic regression lines. With an  $R^2$  change of .038 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Perceptual composite as the predictor variable White and Hispanic sophomores would be consistently underpredicted in their English grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. When the model comparisons were made for gender group differences, using the Perceptual composite resulted again in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .028 (p $\leq$ .001), with Model 8 being the best prediction equation for this group's English grade. Thus, using the Perceptual composite as the predictor variable sophomore females would be consistently underpredicted in their English grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Perceptual composite score as the aptitude measure resulted in statistically significant intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .053 (p $\leq$ .001), with Model 11 being the best prediction equation for this sample's English grade. Thus, White and Hispanic sophomores would be consistently underpredicted in their English grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for Juniors 1984-85. gender group differences, using the Perceptual composite resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .040 (p≤.001), with Model 8 being the best prediction equation for this group's Thus, using the Perceptual com osite as the English grade. variable junior females would predictor be consistently underpredicted in their English grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White, Black and Hispanic regression lines. With an  $R^2$  change of .027 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Perceptual composite as the predictor variable White and Hispanic juniors would be consistently underpredicted in their English grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. When the model comparisons were made for gender group differences, using the Perceptual composite resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .045 (p $\leq$ .001), with Model 8 being the best prediction equation for this group's

English grade. Thus, using the Perceptual composite as the predictor variable junior females would be consistently underpredicted in their English grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White and Black regression lines. With an  $R^2$  change of .018 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Perceptual composite as the predictor variable White juniors would be consistently underpredicted in their English grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. When the model comparisons were made for gender group differences, using the Perceptual composite resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .014 (p<.001), with Model 8 being the best prediction equation for this group's Thus, using the Perceptual composite as the English grade. predictor variable senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White, Black and Hispanic regression lines. With an  $R^2$  change of .025 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Perceptual composite as the predictor variable White and Hispanic seniors would be consistently underpredicted in their English grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

### General Math

Freshmen 1984-85. This sample, using the Perceptual composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contain only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of General Math course grades obtained by freshmen during this school year.

When the model comparisons were made for ethnic group using this composite, the results differences statistically significant intercept differences among the White, Black and Hispanic regression lines. With an R<sup>2</sup> change of .013 (p<.001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Perceptual composite as the predictor variable White and Hispanic freshmen would be consistently underpredicted in their General Math grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

<u>Freshmen 1985-86</u>. For this sample, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Models 9 or 12 containing only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Perceptual composite in the equations, showed no statistically significant slope or intercept differences between the gender group members regression lines. Thus, Model 9 could be used in predicting General Math course grade for these individuals.

Using the Perceptual composite in the equations, showed statistically significant intercept differences between the White and Black ethnic subgroups. With an  $R^2$  change of .042 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite were used in the prediction of General Math course grade, White sophomores would be consistently underpredicted on the criterion while Black sophomores would be consistently overpredicted.

Juniors 1984-85. Like previous samples using the Perceptual composite, this sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Models 9 or 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences between the gender subgroups. Thus, Model 9, containing the unit vector and the Perceptual composite score, could be used in predicting General Math course grade for these individuals.

Using the Perceptual composite in the equations, showed statistically significant intercept differences between the White and Black ethnic subgroups. With an  $R^2$  change of .043 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite were used in the prediction of General Math course grade, White juniors would be consistently underpredicted on the criterion while Black juniors would be consistently overpredicted.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

The Perceptual composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior ethnic groups and resulted in an  $\mathbb{R}^2$  change of .066 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite White seniors would be consistently underpredicted in their General Math grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

### Algebra

<u>Freshmen 1984-85</u>. Using the ASVAB Perceptual composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups with an  $R^2$  change of .012 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their

Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Konwhite. Thus, Model 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

<u>Freshmen 1985-86</u>. Using the Perceptual composite as the aptitude predictor variable resultsed in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Algebra course grades obtained in 1985-86 by freshmen.

With the Perceptual composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White and Nonwhite ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  change of .049 (p $\leq$ .001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using this composite, White freshmen would be consistently underpredicted in their Algebra grades if the common regression line were used, while Nonwhite freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. In this 1934-85 sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Nonwhite ethnic group members. Models 9 or 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1984-85 by sophomores.

<u>Sophomores 1985-86</u>. Using the Perceptual composite as the aptitude predictor variable resultsed in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

With the Perceptual composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White and Nonwhite ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  change of .037 (p<.001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using this composite, White sophomores would be consistently underpredicted in their Algebra grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. In this 1984-85 sample, using the Perceptual Speed composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Black. Again, Models 9 or 12 could be used in the prediction of Algebra course grades obtained in 1984-85 by juniors.

Juniors 1985-86. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Algebra course grades obtained in 1985-86 by juniors.

With the Perceptual composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White and Nonwhite ethnic groups. These comparisons resulted in  $R^2$  change of .048 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using this composite, White juniors would be consistently underpredicted in their Algebra grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

## Geometry

Freshmen 1985-86. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Geometry course grades obtained in 1985-86 by freshmen.

With the Perceptual composite as the aptitude measure the results showed statistically significant slope differences in the prediction equation for the White, Black and Hispanic ethnic groups. These comparisons resulted in R<sup>2</sup> change of .021 (p $\leq$ .01) for the Model 10 vs Model 11 comparison. Therefore, Model 10 would be the best prediction equations for this sample. Thus, the change in the Geometry grade per unit change in the Perceptual composite was significantly different for White, Black and Hispanic freshmen.

Sophomores 1964-85. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Geometry course grades obtained in 1984-85 by sephomores.

With the Perceptual composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White, Black and Hispanic ethnic groups. These comparisons resulted in R² change of .024 (p≤.01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using this composite, White and Hispanic sophomores would be consistently underpredicted in their Geometry grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

### General Science

Freshmen 1984-85. Using the Perceptual Speed composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 comparison. However, the Model 2 vs Model 5 comparsion showed that these two models were not significantly different. Model 5 included the unit vector, the Perceptual score by ethnicity two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 5 as the best prediction equation for this sample's General Science grade, no differential validity for the gender by Perceptual score two-way interaction predictor variables was evidenced.

Freshmen 1985-86. In this 1985-86 sample, using the Perceptual Speed composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Black. Again, Models 9 or 12 could be used in the prediction of General Science course grades obtained in 1985-86 by freshmen.

Sophomores 1984-85. In this 1984-85 sample, using the Perceptual Speed composite score as the aptitude predictor variable, the results also showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Nonwhite. Again, Models 9 or 12 could be used in the prediction of General Science course grades obtained by sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Perceptual composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group members. Model 9, which contained the unit vector and the Perceptual composite score, could be used in the prediction of General Science course grades obtained by sophomores in 1985-86.

When the model comparisons were made for ethnic group differences, using the Perceptual composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .102 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White sophomores would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Perceptual composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group members. Model 9, which contained the unit vector and the Perceptual composite score, could be used in the prediction of General Science course grades obtained by juniors in 1984-85.

When the model comparisons were made for ethnic group differences, using the Perceptual composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .119 (p $\le$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White juniors would be consistently underpredicted in their General Science grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Science course grades obtained in 1985-86 by juniors.

With the Perceptual composite as the aptitude measure the results showed statistically significant slope differences in the prediction equation for the White and Nonwhite ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  change of .034 (p $\leq$ .01) for the Model 10 vs Model 11 comparison. Therefore, Model 10 would be the best prediction equations for this sample. Thus, the change in the General Science grade per unit change in the Perceptual composite was significantly different for White and Nonwhite juniors.

## Biology I -II

Freshmen 1984-85. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Biology course grades obtained in 1984-85 by freshmen.

When the model comparisons were made for ethnic group differences, using the Perceptual composite, the results showed statistically significant intercept differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .026 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Biology grade. Thus, using this composite, White freshmen would be consistently underpredicted in their Biology grades if the common regression line were used, while Nonwhite freshmen would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Biology course grades obtained in 1985-86 by freshmen.

When the model comparisons were made for ethnic group differences, using the Perceptual composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .019 (p $\leq$ .001), with Model 11 being the best prediction equation for this sample's Biology grade. Thus, using this composite, White freshmen would be consistently underpredicted in their Biology grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Biology course grades obtained in 1984-85 by sophomores.

When the model comparisons were made for ethnic group differences, using the Perceptual composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .011 (p $\leq$ .001), with Model 11 being the best prediction equation for this sample's Biology grade. Thus, using this composite, White sophomores would be

consistently underpredicted in their Biology grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant intercept differences between the gender group members and an  $R^2$  change of .023 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Biology grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. In this sample, using the Perce, tual Speed composite score as the aptitude predictor variable, the results also showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Biology course grades obtained by juniors.

When the model comparisons were made for ethnic group differences, using the Perceptual composite, the results showed statistically significant intercept differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .033 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Biology grade. Thus, using this composite, White juniors would be consistently underpredicted in their Biology grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested only for gender group differences. Using the Perceptual composite as the predictor variable resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Perceptual composite, could be used in the prediction of Biology course grade for these juniors.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Perceptual composite in the equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Biology course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an R2 change of .029 (p≤.01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of Biology course grade, White seniors would be consistently underpredicted on criterion while Black seniors would be consistently overpredicted.

#### Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Perceputal composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the Perceptual Speed composite, could be used in the prediction of Chemistry course grades obtained by freshmen in this year.

Sophomores 1985-86. This sample tested only for gender group differences. Using the Perceptual composite as the predictor variable, the results indicated statistically significant intercept differences for the gender groups. With an  $\mathbb{R}^2$  change of .023 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regressior line were used.

Juniors 1984-85. Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender groups or the White and Nonwhite ethnic group members. Thus, Model 9 or Model 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Chemistry course grades obtained by juniors during this school year.

#### Physics I - II

Juniors 1985-86. This sample tested only for gender group differences. Using the Perceptual composite in the equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which

contained the unit vector and the ASVAB Perceptual composite, could be used in the prediction of Physics course grades obtained during this year by juniors.

### Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The Perceptual composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Perceptual composite, could be used in the prediction of Government course grades obtained by freshmen for this year.

Sophomore 1984-85. This sample tested for gender group differences. Again, using the Perceptual composite as the predictor variable, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Government course grade for these sophomores.

Sophomores 1985-86. The use of this ASVAB composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Government course grades obtained by sophomores during this school year.

Statistically significant intercept differences resulted between the White and Hispanic ethnic subgroups. With an  $\mathbb{R}^2$  change of .041 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in previous samples, the Perceptual composite equations resulted in no statistically significant intercept differences for the gender groups. Model 9, containing the unit vector and the Perceptual composite score, could be used in the prediction of Government course grade for these individuals.

The use of this Perceptual composite in the equations again resulted in statistically significant intercept differences for the ethnic subgroups. With an  $R^2$  change of .051 (p $\leq$ .01) for the

Model 11 vs 12 comparison, Model 11 would be the best prediction equations for these juniors. Using this composite, White juniors would be consistently underpredicted in their Government grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for gender groups. Thus, Model 9, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

With the Perceptual composite as the aptitude measure the results showed statistically significant slope differences in the prediction equation for the White and Black ethnic groups. These comparisons resulted in  $R^2$  change of .019 (p $\leq$ .001) for the Model 10 vs Model 11 comparison. Therefore, Model 10 would be the best prediction equations for this sample. Thus, the change in the Government grade per unit change in the Perceptual composite was significantly different for White and Black juniors.

<u>Seniors 1984-85</u>. Similar to some of the previous samples, using the Perceptual composite score as the aptitude predictor variable, resulted in no statistically significant intercept differences for the gender or White and Black ethnic group members. Again, Models 9 or 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

#### **History**

Freshmen 1984-85. Using the Perceptual Speed composite with this sample, the results showed statistically significant differences between the Model 2 vs Models 4, 5 and 6 comparisons. With Model 2 as the best prediction equation for this sample's History grade, differential validity for the gender by Perceptual score and ethnicity by Perceptual score two-way interaction predictor variables was evidenced. The ethnic subgroups included in this sample were White, Black and Hispanic.

Freshmen 1985-86. The use of this ASVAB composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an R2 change of .013 (p≤.001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of History course grade, White freshmen would be consistently underpredicted on this while Black freshmen would be consistently criterion overpredicted.

Sophomores 1984-85. The use of this ASVAB composite score as the aptitude measure also resulted in no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

Again, statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $R^2$  change of .019 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Inus, if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Black sophomores would be consistently overpredicted.

Sophomores 1985-86. Using the Perceptual Speed composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 comparison. However, the Model 2 vs Model 5 comparsion showed that these two models were not significantly different. Model 5 included the unit vector, the Perceptual score by ethnicity two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 5 as the best prediction equation for this sample's History grade, no differential validity for the gender by Perceptual score two-way interaction predictor variables was evidenced.

Juniors 1984-85. In this sample, using the Perceptual composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of History course grades obtained in 1984-85 by juniors.

When the model comparisons were made for ethnic group differences, using the Perceptual composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .055 (p $\leq$ .001), with Model 11 being the best prediction equation for this sample's History grade. Thus, using this composite, White juniors would be

consistently underpredicted in their History grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Perceptual composite score as the aptitude predictor variable, results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R<sup>2</sup> change of .015 (p<.01) for the Model 8 vs Model Therefore, Model 8 would be the best prediction 9 comparison. equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

statistically significant intercept Again, differences resulted between the White and Black ethnic subgroups. With an change of .035 (p $\leq$ .01) for the Model 11 vs Model comparison, Model 11 would be the best prediction system. if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of History course grade, White juniors would be consistently underpredicted on this criterion while Black juniors would be overpredicted.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Perceptual composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of History course grade for these seniors.

significant intercept differences Statistically between the White and Black ethnic subgroups. With an R2 change of .074 (p≤.01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would consistently be overpredicted.

# Foreign Language

At first, using this composite with this Freshmen 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. the ASVAB Perceptual composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. The results showed an R<sup>2</sup> change of .014 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the variable, predictor freshmen females would consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups. Therefore, Model 12, containing the unit vector and the Perceptual composite score, could be the best prediction equation for this sample's Foreign Language grades.

At first, using this composite with thi Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Perceptual composite within the equations, the results showed statistically significant intercept differences between the male The R2 change for the Model 8 and and female regression lines. Model 9 comparison was approximately .017 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Thus, freshmen females would be consistently Language grade. underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Perceptual composite within the equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Model 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by freshmen during this school year.

<u>Sophomores 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the

White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Perceptual composite predictor equations showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .028 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this composite as the aptitude measure, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the use of this Perceptual composite in the prediction equations resulted in no statistically significant slope or intercept differences for the ethnic group members. Therefore, Model 12, which contained the unit vector and the Perceptual composite, could be used in the prediction of these sophomores' Foreign Language course grade.

Sophomores 1985-86. Using the ASVAB Perceptual composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .018 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Again, Model 12 could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Using the ASVAB Perceptual composite as the <u>Juniors 1984-85.</u> aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .040 (p $\le$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. composite junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would consistently overpredicted if a common regression line were used.

With the Perceptual composite as the aptitude measure the results showed statistically significant slope differences in the prediction equation for the White, Black and Hispanic ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  change of .022 (p $\leq$ .01)

for the Model 10 vs Model 11 comparison. Therefore, Model 10 would be the best prediction equations for this sample. Thus, the change in the Foreign Language grade per unit change in the Perceptual composite was significantly different for White, Black and Hispanic juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Perceptual prediction equations resulted in no statistically significant slope or intercept differences for the gender or White and Hispanic ethnic group members. Thus, Model 9 or 12, Which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

# Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite ethnic group differences. Using the Perceptual composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Perceptual composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample also tested only for White and Nonwhite ethnic group differences. Again, using the Perceptual composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Perceptual composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Perceptual prediction equations resulted in no statistically significant slope or intercept differences for the gende group members. Thus, Model 9, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Statistically significant intercept differences resulted between the White, Black and Hispanic ethnic subgroups. With an  $\mathbb{R}^2$  change of .041 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of Typing course grade, White and Hispanic freshmen would be consistently underpredicted on this criterion while Black freshmen would be consistently overpredicted.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were i vestigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations white the previous sample, the Perceptual composite rediction equations resulted in no statistically significant stope or interest differences for the gender or ethnic chapters. Again, Model 9 or 12 could be used in the prediction of Typing Contents obtained by freshmen for this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences wer investigated by no it. Juding ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group di lerences were studied by not including the gender variables in the equations. model comparisons were made for gender group differences, using the Perceptual composite resulted in strtistically significant slope differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 7 and Model 8 comparison was (p≤.01), with Model 7 being the best approximately .010 prediction equation for this group's Typing grade. Thus, the change in the Typing grade per unit change in the Perceptual composite was significantly different for this year's sophomore males and females.

The results showed no statistically significant slope or intercept differences for the ethnic group members. Model 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The Perceptual composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these juniors.

<u>Juniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Perceptual composite in the equations resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Typing course grade for these juniors.

Statistically significant intercept differences resulted between the White and Nonwhite ethnic subgroups. With an  $\mathbb{R}^2$  change of .055 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Perceptual composite as the aptitude measure were used in the prediction of Typing course grade, White juniors would be consistently underpredicted on this criterion while Nonwhite juniors would be consistently overpredicted.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Perceptual composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the Perceptual composite, could be used in the prediction of Typing course grades obtained by seniors for this year.

# Accounting and Bookkeeping

Sophomores 1985-86. This sample tested only for gender group differences. The use of the Perceptual composite as the predictor variable showed no statistically significant slope or intercept differences in the prediction equation. Therefore, Model 9 containing the unit vector and the Perceptual composite score would be the best prediction equation for this sample.

<u>Juniors 1984-85</u>. This sample also tested for gender group differences. Using the Perceptual composite prediction equations, the results showed no statistically significant slope or intercept differences for the gender groups. With an  $R^2$  change of .027 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested for gender group differences. Again, using the Perceptual composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Accounting course grade for these juniors.

<u>Seniors 1984-85</u>. Like the junior samples, this sample tested for gender group differences. The use of the Perceptual composite as a predictor variable resulted in no statistically significant slope or intercept differences for the gender groups. Again, Model 9 could be used in the prediction of Accounting course grade for these individuals.

#### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations composite showed statistically the ASVAB Perceptual significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an R<sup>2</sup> change of .019 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore. Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the Perceptual composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $\mathbb{R}^2$  change of .089 ( $p \le .01$ ) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these juniors. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by including the gender variables in the equations. Using the Perceptual composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an R2 change of .041 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The Perceptual prediction equations resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12, which contained only the unit vector and the Perceptual composite score in the prediction equation, could be used in the prediction of Home Economics course grades obtained by freshmen during this school year.

At first, using this composite with this Sophomore 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with ASVAB Perceptual composite the statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change (p≤.01) for the Model 8 vs Model 9 comparison. .019 Therefore, Model 3 would be the best prediction equation for this Using this composite, sophomore females would be sample. consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic Perceptual composite differences. usina the resulted statistically significant slope differences between the White and Nonwhite regression lines. The R<sup>2</sup> change for the Model 10 and Model 11 comparison was approximately .017 (p≤.01), with Model 10 being the best prediction equation for this group's Home Thus, the change in the Home Economics grade Economics grade. per unit change in the Perceptual composite was significantly different for this year's White and Nonwhite sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the prediction resulted Perceptual composite equations statistically significant intercept differences for the gender group members and resulted in an  $R^2$  change of .017 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences ware conducted using the ASVAB Perceptual composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

Juniors 1934-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Perceptual composite prediction equations resulted in no statistically significant slope or intercept differences in the prediction equations for the gender or ethnic groups. Model 9 or 12 could be used in the prediction of Home Economics course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the Perceptual composite equations, resulted in statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .056 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Perceptual composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the sample, the Perceptual composite equations junior 1985-86 resulted in statistically significant intercept differences for the gender group members. An R<sup>2</sup> change of .028 (p≤.01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Perceptual composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

# Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Perceptual composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $R^2$  change of .038 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. Like the sophomore sample, this sample tested for gender group differences. However, using the Perceptual composite as a predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contained the unit vector and the Perceptual composite score, could be used in the prediction of Computer Programming grades for these individuals.

<u>Juniors 1985-86</u>. The model comparisons also tested only for gender group differences. Using the Perceptual high school predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .054 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Table 13.</u> Summary of Equity Findings for Prediction of High School Course Grades by Perceptual Speed Composite

Course		Sex	Ethnicity	Sex*Ethnicity
English 1.	IV			
Fresh	84 - 85	NS	S	1
fresh	85-86	NS	S	1
\$oph	84-85	1	1	NS
Soph	85-86	1	1	NS
Jr	84-85	1	1	NS
٦٢	85~86	1	i	NS NS
\$r	84-85	1	1	NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 13. (Continued)

Course		Sex	Ethnicity	Sex*Ethnicity
General Mat				<del>                                     </del>
fresh	"84-85	E	1	NS
fresh	85-86	Ē	Ė	NS
	84-85	_		
Soph		Ē	E	NS
Soph	85-86	E	1	NS
٦r	84-85	E	E	NS
٦r	85-86	E	1	) NS
	84-85	E	1	NS
Algebra				
fresh	84-85	I	E	) NS
Fresh	85-86	E	1	l KS
Soph	84-85	E	E	. NS
Soph	85-85	Ē	i	NS
J۳	84-85	Ē	Ē	NS
Jr	85-86	Ē	i	NS
Geometry	·		<del> </del>	<del></del>
Fresh	85-86	٤	s	NS
Soph	84-85	Ē	ī	NS
General Sci	ence			1
fresh	84-85	NS	s	1 1
Fresh	85-86	E	Ē	NS
Soph	84-85	Ē	Ē	NS
Soph	85-86	Ē	i	NS
•	84-85	_	-	
ήr		E	1	NS
tr	85-86	E	S	NS NS
Biology		_		
Fresh	84-85	E	] 1	NS
Fresh	85-86	Ε	į i	NS
Soph	84-85	E	1	NS NS
\$oph	85-86	1	E	NS
Jr	84-85	E	1	NS
11	85 - 86	Ċ	NT	NS
Sr	84.85	Ē	i	NS
Chemistry			<del></del>	
Fresh	85-86	Ε	NT	NS
Soph	85-86	ĩ	NT	NS NS
Jr	84 - 85	É	}	NS
			ļ	ļ
Physics Jr	85-86	E	NT	NS
			<b>—</b>	
Government				1
Fresh	84-85	Ε	NT	NS
Soph	84-85	E E	NT	NS
Soph	85-86	£	1	NS NS
Ĵ۲	84-85	E	1	NS
Jr	85-86	Ē	S	NS
\$r	84-85	Ē	Ē	NS
History			1	
Fresh	84-85	s	s	s
	85-86	E	1	NS
Fresin				
Soph	84-85	E	1	NS
Soph	85-86	NS	\$ 1	1
٦r	84-85	E	1	NS
٦r	85-86	<u>i</u>	1	NS
Sr	84-85	E	1	NS

Note. NS = Not significant; i = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 13. (Concluded)

Course		Sex	Ethnicity	Sex*Ethnicity
Foreign Lar	nguage	·		
Fresh	84-83	1	E	NS
Fresh	85-06	1	E	NS
Soph	84-85	1	E	NS
Soph	85-86	1	E	) NS
٦Ľ	84 - 85	i	S	NS
jr	85-86	Ε	E	NS
Secretary 8	Ofc	<del></del>		T
16	85-86	NT	E	, , ,
Sr	84-85	NT	ε	NS
Typing				
Fresh	84-85	E	1	NS
Fresh	85-86	E	E	NS
Soph	84-85	S	E	NS
Jr	84-85	E	E	NS
٦٢	85-86	E	1	NS
Sr	84-85	E	NT	NS
Accounting				
Soph	85-86	Ε	NT	NS
Jr	84-85	I	NT	NS
Jr	85-86	E	NT	NS
Sr	84-85	E	NT	NS NS
Home Econor				
fresh	84-85	I	1	NS
Fresh	85-86	1	E	NS
Soph	84 - 85	1	s	NS
Soph	85-86	1	E	NS
J٢	84-85	E	E	NS
٦٢	85-86	1	E	NS
Sr	84-85	1	E	NS
Computer P	rogram			
Soph	85-86	1	NT	NS
٦r	84-85	E	NT	NS
Jr	85-86	1	NT NT	NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

# Technical Composite

### English I - IV

<u>Freshmen 1984-85</u>. When the model comparisons were made for gender group differences, using the Technical composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 3 comparison was approximately .007 (p $\leq$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Technical composite was significantly different for this year's freshmen males and females.

Using the Technical composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of English course grade for these freshmen.

<u>Freshmen 1985-86</u>. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .064 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Technical composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White, Black and Hispanic regression lines. With an  $R^2$  change of .016 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Technical composite as the predictor variable White freshmen would be consistently underpredicted in their English grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used. The Hispanic freshmen regression line appeared to be at an equal distance between the White and Black regression lines.

<u>Sophomores 1984-85</u>. When the model comparisons were made for gender group differences, using the Technical composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .013 (p $\leq$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Technical composite was significantly different for this year's sophomore males and females.

When the model comparisons were made for ethnic group differences using this ASVAB composite, the results showed statistically significant intercept differences among the White, Black and Hispanic regression lines. With an  $R^2$  change of .016 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for this sample. Using the Technical composite as the predictor variable White and Hispanic freshmen would be consistently underpredicted in their English grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

<u>Sophomores 1985-86</u>. When the model comparisons were made for gender group differences, using the Technical composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .011 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Technical composite was significantly different for this ycar's sophomore males and females.

Using the Technical composite score as the aptitude measure also resulted in statistically significant intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The  $1.^{\circ}$  change for the Model 11 and Model 12 comparison was approximately .031 (p<.001), with Model 11 being the best prediction equation for this sample. Thus, using the Technical composite as the predictor variable White and Hispanic sophomores would be consistently underpredicted in their English grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. When the model comparisons were made for gender group differences, using the Technical composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .010 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Technical composite was significantly different for these junior males and females.

Using the Technical composite score as the aptitude measure also resulted in statistically significant intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. The R<sup>2</sup> change for the Model 11 and Model 12 comparison was approximately .019 (p $\leq$ .001), with Model 11 being the best prediction equation for Thus, using the Technical composite as the this sample. predictor variable White and Hispanic juniors would consistently underpredicted in their English grades if the common regression line were used, while Black juniors would consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. As in the 1984-85 school year, using the Technical composite in the equations resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .013 (p $\leq$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Technical composite was significantly different for these junior males and females.

Using the Technical composite score resulted in statistically significant intercept differences for the ethnic groups, with this sample including only White and Black individuals. change for the Model 11 and Model 12 comparison was approximately .016 (p≤.001), with Model 11 being the best prediction equation for this sample. Thus, using the Technical composite as the variable White consistently predictor juniors would be underpredicted in their English grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. The ASVAB Technical composite as the aptitude predictor showed statistically significant slope differences in the prediction equations for the two senior gender groups and resulted in an R change of .009 ( $p \le .001$ ) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the English grade per unit change in the ASVAB Technical composite was significantly different for these senior males and females.

Using this ASVAB composite score in the equations resulted in statistically significant intercept differences for the White, Black and Hispanic ethnic group members. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .010 (p<.001), with Model 11 being the best prediction equation for this sample. Thus, using the Technical composite as the predictor variable White and Hispanic seniors would be consistently underpredicted in their English grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

# General Math

<u>Freshmen 1984-85</u>. This sample, using the Technical composite score as the aptitude predictor variable, showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .019 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Technical composite as the predictor variable freshmen females would be consistently underpredicted in their General Math grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Model 12, containing only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Technical composite score as the aptitude predictor variable, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .059 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Technical composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently overpredicted.

Using the Technical composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12, containing the unit vector and the Technical composite score, could be used in predicting General Math course grade for these individuals.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Models 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

#### Algebra

Freshmen 1984-85. Using the Technical composite score as the aptitude predictor variable, showed statistically significant intercept differences between the male and female gender subgroups. With an  $\mathbb{R}^2$  change of .060 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Technical composite were used in the prediction of Algebra course grade, female freshmen would be consistently underpredicted on the criterion while male freshmen would be consistently overpredicted.

Using the Technical composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members, which are defined as White and Nonwhite in this sample. Thus, Model 12, containing the unit vector and the Technical composite score, could be used in predicting Algebra course grade for these individuals.

<u>Freshmen 1985-86</u>. Using the Technical composite score as the aptitude predictor variable, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .068 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the Technical composite were used in the prediction of Algebra course grade, female freshmen would be consistently underpredicted on the criterion while male freshmen would be consistently overpredicted.

With the Technical composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White and Nonwhite ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  changes of .022 (p $\leq$ .001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using this composite, White freshmen would be consistently underpredicted in their Algebra grades if the common regression line were used, while Nonwhite freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. In this 1984-85 sample, using the Technical composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .036 ( $p \le .001$ ) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

<u>Sophomores 1985-86</u>. In this sample, using the Technical high school composite, the results also shawed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .034 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite,

sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Technical composite as the predictor resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Technical composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of Algebra course grade for these juniors.

With the Technical composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White and Nonwhite ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  changes of .035 (p<.01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using this composite, White juniors would be consistently underpredicted in their Algebra grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

#### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted in an R<sup>2</sup> change of .020 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Geometry grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

With the Technical composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White, Black and Hispanic ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  changes of .021 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using

this composite, White and Hispanic freshmen would be consistently underpredicted in their Geometry grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. composite equations the Technical in the resulted in statistically significant intercept differences for the gender group members. With an R2 change of .041 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Technical composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Technical aptitude as the measure, the results statistically significant intercept differences for the gender group members. With an  $\mathbb{R}^2$  change of .072 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

With the Technical composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equation for the White and Black ethnic groups. These comparisons resulted in  $\mathbb{R}^2$  change of .039 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equations for this sample. Using this composite, White sophomores would be consistently underpredicted in their Geometry grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Technical composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .056 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the Technical composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Fonwhite ethnic group differences were studied by not including the gender variables in the equations. With the Technical composite as the aptitude measure, the results showed no statistically significant slope or intercept differences for the gender group members. Thus, Model 9 could be used in the prediction of Geometry course grades obtained by juniors during the 1985-86 school year.

When the model comparisons were made for ethnic group differences using the Technical composite, the results showed statistically significant intercept differences for the ethnic group members. With an  $R^2$  change of .109 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for Geometry course grade for these juniors. Using this composite, White juniors would be consistently underpredicted in their Geometry grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Technical composite equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

#### General Science

Freshmen 1984-85. Using the Technical composite with this sample, the results showed no statistically significant

differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Technical composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by Technical score two-way interaction variables or the sex by Technical score two-way interaction variables.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. With the Technical composite aptitude measure, as the the results statistically significant intercept differences for the gender group members. With an  $R^2$  change of .025 (p $\le$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for General Science course grade for these freshmen. Using this composite, freshmen females would be consistently underpredicted in their General Science grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the Technical composite as the aptitude predictor variable resulted in no statistically significant intercept differences for the ethnic group members. Model 12, which contained the unit vector and the Technical composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

Sophomores 1984-85. In this 1984-85 sample, using the Technical composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .078 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores during this school year.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the Technical composite as the aptitude measure resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .059 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's General Science grade. Thus, using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Technical composite, the results showed statistically significant intercept differences between the White and Black regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .048 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's General Science grade. Thus, using this composite, White sophomores would be consistently underpredicted in their General Science grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, using the Technical composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .035 (p≤.01), with Model 8 being the best prediction equation for this sample's General Science grade. Thus, using this composite, junior females would be consistently underpredicted in their General Science grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

This Technical composite prediction equation resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the Technical composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .052 (p $\le$ .01), with Model 8 being the best prediction equation for

this sample's General Science grade. Thus senior females would be consistently underpredicted in their General Science grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Technical composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .065 (p<.01), with Model 8 being the best prediction equation for this sample's Biology grade. Thus, using this composite, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

This Technical composite equation also resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

Freshmen 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .052 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Technical composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

<u>Sophomores 1984-85</u>. The use of this composite with this sample resulted in statistically significant slope differences in the prediction equations for the two freshmen gender groups, with an  $R^2$  change of .008 (p $\leq$ .001) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction

equation for this sample. The change in the Biology grade per unit change in the ASVAB Technical composite was significantly different for these sophomore males and females.

When the tests for ethnic group differences were conducted using the Technical composite as the predictor composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups. Thus, Model 12 could be used in the prediction of Biology grades obtained by sophomores during this school year.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant slope differences between the gender group members and an  $R^2$  change of .022 (p $\leq$ .01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. Thus, the change in the Biology grade per unit change in the Technical composite was significantly different for freshmen males and females.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

<u>Juniors 1984-85</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .075 (p<.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the pest prediction equation for this sample. Using the Technical composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently everpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

Juniors 1985-86. This sample tested only for gender group differences. Using the Technical composite as the predictor variable resulted in statistically significant intercept

differences for the gender groups. With an  $R^2$  change of .131 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Biology course grade for these juniors. Using the Technical composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Technical composite in the equations resulted in statistically significant intercept differences for the gender members. With an R2 change of .110 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equations for these seniors. Using composite, senior females would be consistently underpredicted in their Biology grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the Technical composite as the predictor composite, the results showed statistically significant intercept differences in the prediction equations for the White and Black ethnic groups, with an R<sup>2</sup> change of .090 (p≤.01) for the Model 11 vs Model 12 Therefore, Model 11 would be the best prediction comparison. equation for this sample. Using the Technical composite as the predictor variable, White seniors would be consistently underpredicted in their Biology grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

# Chemistry I - II

<u>Sophomores 1984-85</u>. This sample tested only for gender group differences. Again, with the Technical composite in the equations, the results showed statistically significant intercept differences for the gender groups. With an  $\mathbb{R}^2$  change of .061 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 could be used in the prediction of Chemistry course grades obtained by these sophomores. Sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this

Technical composite in the equations resulted in statistically significant intercept differences for the gender group members. With  $R^2$  change of .070 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equations for these juniors. Using this composite, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

iors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Technical composite, the results showed no statistically significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

### Government and Civics

<u>Freshmen 1984-85</u>. This sample tested only for gender group differences. The Technical composite prediction equations resulted in statistically significant intercept differences for the gender groups. Thus, with an  $R^2$  change of .040 (p $\le$ .01) for the Model 8 vs Model 9 comparisor, Model 8 would be the rest predictor for this group's Government course grade. Freshmen females would be consistently underpredicted in their Government grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this Technical composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .040 and .041 (p<.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, Models 8 and 11 would be the best prediction equations for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Government grades if the

common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the Technical composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this Technical composite in the equations resulted in statistically significant intercept differences for the gender subgroup.  $R^2$  change of .073 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common junior regression line were used, while males would consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the Technical composite as the predictor composite, the results showed statistically significant intercept differences in the prediction equations for the White and Nonwhite ethnic groups, with an  $R^2$  change of .022 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using the Technical composite as the predictor variable, White juniors would be consistently underpredicted in their Government grades if the common regression line were used, while Nonwhite juniors would be consistently overpredicted if a common regression line were used.

<u>Juniors 1985-86</u>. This sample, using the Technical composite score as the aptitude predictor variable, resulted in statistically significant slope differences for the gender group members. With an  $R^2$  change of .019 (p $\leq$ .001) for the Model 7 vs Model 8 comparison, Model 7 was the best prediction equation for this sample. Thus, the change in the Government grade per unit change in the Technical composite was significantly different for junior males and females.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

<u>Seniors 1984-85</u>. Similar to some of the previous samples, using the Technical composite score as the aptitude predictor variable, resulted in statistically significant intercept

differences for the gender group members. With  $R^2$  change of .046 (p $\le$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these seniors. Using this composite, senior females would be consistently underpredicted in their Government grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When ethnic group differences were investigated using this composite, the results showed no statistically significant slope or intercept differences for the White and Black ethnic group members. Again, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

### <u>History</u>

Freshmen 1984-85. The use of the ASVAB Technical composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .074 (p<.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the Technical composite score as the apritude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .036 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in statistically significant intercept differences for the White and Black ethnic group members. With an  $R^2$  change of .008 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the

best prediction equation for this sample. Using this composite as the predictor variable, White freshmen would be consistently underpredicted in their History grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a nmon regression line were used.

<u>Sophomores 1984-85</u>. Using the Technical composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .057 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations also resulted in statistically significant intercept differences for the White and Black ethnic group members. With an  $R^2$  change of .014 (p $\leq$ .001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the predictor variable, White sophomores would be consistently underpredicted in their History grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. This sample, using the Technical composite score as the aptitude predictor variable, resulted in statistically significant slope differences for the gender group members. With an  $R^2$  change of .008 (p $\le$ .001) for the Model 7 vs Model 8 comparison, Model 7 was the best prediction equation for this sample. The change in the History grade per unit change in the ASVAB Technical composite was significantly different for these sophomore males and females.

The use of this ASVAB composite in the equations also resulted in statistically significant intercept differences for the White, With an R2 change of Black and Hispanic ethnic group members. (p≤.001) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for Using this composite as the predictor variable, this sample. Hispanic sophomores White would be consistently and underpredicted in their History grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. Like the previous sample, using the Technical composite score as the aptitude predictor variable resulted in statistically significant slope differences in the prediction equations for the two junior gender groups. With an  $R^2$  change of .009 (p≤.001) for the Model 7 vs Model 8 comparison,

Model 7 would be the best prediction equation for this sample. Thus, the change in the History grade per unit change in the ASVAB Technical composite was significantly different for these junior males and females.

The use of this ASVAB composite in the equations resulted in statistically significant intercept differences for the White and Black ethnic group members. An  $R^2$  change of .030 (p $\leq$ .001) for the Model 11 vs Model 12 comparison was evidenced. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the predictor variable, White juniors would be consistently underpredicted in their History grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. Using the Technical composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .082  $(p \le .01)$  for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in statistically significant intercept differences for the White and Black ethnic group members. An  $R^2$  change of .035 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the predictor variable, White juniors would be consistently underpredicted in their History grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the Technical composite in the prediction equations resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .062 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their History grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Statistically significant intercept differences also resulted between the White and Black ethnic subgroups. With an  $\mathbb{R}^2$  change of .049 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Technical composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

### Foreign Language

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. ASVAB Technical composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups. The results showed an  $R^2$  change of .073 (p $\le$ .01) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison. prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups. Therefore, Model 12, containing the unit vector and the Technical composite score, could be the best prediction equation for this sample's Foreign Language grades.

<u>Freshmen 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the Technical composite within the equations, the results showed statistically significant slope differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 7 and Model 8 comparison was approximately .011 ( $\mathbb{p} \le .01$ ), with Model 7 being the best prediction equation for this sample's Foreign Language grade. Thus, the change in the Foreign Language grade per unit change in the Technical composite was significantly different for freshmen males and females.

When the model comparisons were made for ethnic group differences, using the Technical composite within the equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Mcdel 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. prediction equations the Technical showed statistically significant slope differences between the male and female The R<sup>2</sup> change for the Model 7 and Model 8 regression lines. comparison was approximately .015 (p≤.01), with Model 7 being the best prediction equation for this sample's Foreign Language grade. The change in the Foreign Language grade per unit change in the Technical composite was significantly different for sophomore males and females.

When the model comparisons were made for ethnic group differences using of this Technical composite in the prediction equations, the results showed no statistically significant slope or intercept differences between the White, Black and Hispanic regression lines. Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Sophomores 1985-86. Using the ASVAB Technical composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an R<sup>2</sup> change of .069 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Technical prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .080  $(p \leq .01)$ , with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, the Technical prediction equations resulted in statistically significant intercept differences between the male and female The R<sup>2</sup> change for the Model 8 and Model 9 regression lines. comparison was approximately .032 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The Technical composite prediction equations resulted in no statistically significant slope or intercept differences for the two ethnic groups. Model 12 could be used in the prediction of Foreign Language course grade for these individuals.

### Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Technical prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .037 (p $\leq$ .01), with Model 8 being the

best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Technical prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately (p≤.01), with Model 8 being the best .044 prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

<u>Sophomores 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. showed statistically significant again intercept differences between the male and female regression lines. change for the Model 8 and Model 9 comparison was approximately .062 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The Technical prediction equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .027 (p≤.01), with Model 7 being the best prediction equation for this sample's Typing grade. The change in the Typing grade per unit change in the Technical composite was significantly different for sophomore males and females.

Using the Technical composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .102 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the Technical composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White

and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $\mathbb{R}^2$  change for the Model 8 and Model 9 comparison was approximately .057 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Statistically significant intercept differences also resulted between the White and Nonwhite ethnic subgroups. With an  $\mathbb{R}^2$  change of .035 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Technical composite as the aptitude measure were used in the prediction of Typing course grade, White juniors would be consistently underpredicted on this criterion while Nonwhite juniors would be consistently overpredicted.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Technical composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .035 (p $\le$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB Technical composite as the predictor variable showed statistically significant slope differences in the prediction equations for the two sophomore gender groups and resulted in an  $R^2$  change of .026 (p $\leq$ .01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the Accounting grade per unit change in the Technical composite was significantly different for sophomore males and females.

### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Technical composite showed statistically significant intercept differences in the prediction equations for

the two freshmen gender groups and resulted in an  $R^2$  change of .090 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Technical composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $\mathbb{R}^2$  change of .091 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Technical composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an R2 change of .127 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Technical composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for the e freshmen.

<u>Sophomore 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Technical composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .094 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently

underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted ASVAB Technical composite, the results statistically significant intercept differences in the prediction An R<sup>2</sup> change of .058 equations for the two ethnic groups. (p≤.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the prediction Technical composite equations resulted statistically significant intercept differences for the gender group members and resulted in an  $R^2$  change of .091 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Technical composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Technical composite equations resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .076 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Technical composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

## Computer Programming

<u>Juniors 1984-85</u>. This sample tested only for gender group differences. Again, using the Technical composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $R^2$  change of .091 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample tested for gender group differences. The Technical composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Technical composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 14.</u> Summary of Equity Findings for Prediction of High School Course Grades by Technical Composite

Course		Sex	Ethnicity	Sex*Ethnicity
English 1-	IV			
fresh	84 - 85	S	E	NS
Fresh	85 - 86	1	1	NS
Soph	84 - 85	S	1	NS
Soph	85 - 86	S	1	NS
Jr	84-85	S	1	NS
J۲	85-86	\$	1	NS
Sr	84-85	S	I	NS
General Ma	th			
Fresh	84-85	1	E	NS
Soph	84-85	E	E	NS
Jr	85-86	I	E	l NS
Sr	84 - 85	E	E	l ns

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 14. (Continued)

_	Table 141 (continued)				
	Course		Sex	Ethnicity	Sex*Ethnicity
	Alaskaa				
.: -	Algebra			_	
1	Fresh	84 - 85	1	E	NS
	Fresh	85-86	I	1	N5
]	Soph	84 · 85	1	E	) NS
1	Soph	85-86	1	E	NS
	J۲	85-86	E	1	NS
ļ					
j	Geometry				
ļ	Fresh	85-86	1	1	i ns
4	Soph	84 - 85	i	Ē	NS
!	Soph	85-86	i	ī	NS
	Jr	84-85	i	Ė	NS NS
ł	Jr	85-86	Ė	ī	NS
}					
1	Sr	84-85	E	E	NS
	0				
	General Sci				} _
1	Fresh	84-85	NS	NS	1
	Fresh	85-86	1	E	NS
	Soph	84-85	1	E	į NS
	Soph	85-86	1	1	l NS
	Jr	85.86	l i	Ė	NS
ļ	Sr.	84 - 85	i	NT	NS
	J.		<u> </u>		
	Biology				
		D/ 05	i .		
	Fresh	84-85	1	E	NS
	Fresh	85-86	1	E	NS
	Soph	84-85	S	E	NS NS
	\$oph	85-86	S	E	NS
	Jr	84-85	1	E	NS
	Jr	85-86	1	TH	NS
	Sr	84-85	1	1	NS
					ļ
	Chemistry		ļ	}	
	Soph	84-85	1	NT	NS
	Jr	84-85	i	Ë	NS
	Sr.	84-85	Ė	Ē	NS
	" "	O 0.7			N3
	Government				
	1	6/.OF	i .		110
	Fresh	84-85	1	NT	NS
	Soph	85-86	ļ <u>!</u>	1 1	NS
	11	84 - 85	1	1	MS
	J٢	85-86	s	E	NS
	\$r	84~85	1	E	NS
			<del>                                     </del>	<del> </del>	<del> </del>
	History		1		
	Fresh	84-85	] 1	E	NS
	Fresh	85-86	l i	ĺ	NS
		84-85	i	i	NS
	Soph				
	Soph	85-86	s	1	NS
	Jr.	84-85	S	1	NS
	j.	85-86	1	1	MS
	Sr.	84 - 85	1	1	NS
	<del></del>		<del> </del>	ļ	<del> </del>
	foreign Lar	nguage	1		ļ
i	Fresh	84-85	1	ĺξ	NS
	Fresh	85-86	S	E	NS
	Soph	84-85	s	Ē	NS
	Soph	85-86	i	•	NS
	71	85-86	1	E	L
i		84-85			NS NS
	Sr	04-03	1	E	MS
			·	<del></del>	<del></del>

Note. NS = Not significant; I  $\approx$  Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NI = Not tested due to small sample sizes.

Table 14. (Concluded)

Course		Sex	Ethnicity	Sex*Ethnicity
Typing				
Fresh	84 - 85	1	E	NS
Fresh	85-86	1	E	NS
Soph	84 - 85	I	E	NS
Soph	85-86	S	E	NS
Jr	84 - 85	1	E	NS
٦r	85-86	1	i	NS
Sr	84-85	1	NT	NS
Accounting				
Soph	85-86	S	NT	NS
Home Econor	nics			
Fresh	84-85	1	1 1	l NS
Fresh	85-86	1	E	NS
Soph	84-85	I	1	ผร
Soph	85-86	1	E	NS
Sr	84 - 85	I	E	NS
Computer Pr	ogram			
٦٦	84-85	1	NT	NS
Sr	84-85	Ē	NT	NS

Note. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

# General Composite

### English I - IV

Freshmen 1984-85. Using the General composite with this sample, the results showed statistically significant differences between the Model 2 vs Model 4 and the Model 2 vs Model 5 comparisons. However, the Model 2 vs Model 6 comparsion showed that these two models were not significantly different. Model 6 included the unit vector, the General score by sex two-way interaction predictor variables, and the sex by ethnicity tho-way interaction predictor variables. With Model 6 as the best prediction equation for this sample's English grade, differential validiy was evidenced for the ethnicity by General score two-way interaction variables, with ethnicity being defined as White, Black and Hispanic group membership.

<u>Freshmen 1985-86</u>. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .049 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using this ASVAB composite resulted in no statistically significant slope or intercept differences among the White, Black and Hispanic regression lines. Thus, Model 12, which contained the unit vector and the General composite score, could be used in the prediction of English grades obtained by freshmen during this school year.

Sophomores 1984-85. When the model comparisons were made for gender group differences, using the General composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .015 (p $\le$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB General composite was significantly different for this year's sophomore males and females.

Using this composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

Sophomores 1985-86. The model comparisons for gender group differences using the General composite showed statistically significant slope differences between the male and female regression lines, with Model 7 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately 011 (p<.001). Thus, the change in the English grade per unit change in the ASVAB General composite was significantly different for these sophomore males and females.

Statistically significant intercept differences resulted among the White, Black and Hispanic ethnic subgroups. With an  $\mathbb{R}^2$  change of .007 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the General composite were used in the prediction of English course grade, White and Hispanic sopnomores would be consistently underpredicted on the criterion while Black sophomores would be consistently overpredicted.

<u>Juniors 1984-85</u>. When the model comparisons were made for gender group differences, using the General composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .012 (p $\le$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB General composite was significantly different for these junior males and females.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hispanic juniors. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of English course grade for these individuals.

Juniors 1985-86. As in the 1984-85 school year, using the General composite in the equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .012 (p $\leq$ .001), with Model 7 being the best prediction equation for English grade. Thus, the change in the English grade per unit change in the ASVAB General composite was also significantly different for these junior males and females.

Again, using this composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. The ASVAB General composite as the aptitude predictor showed statistically significant slope differences in the prediction equations for the two senior gender groups and resulted in an  $R^2$  change of .007 (p $\leq$ .001) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. The change in the English grade per unit change in the ASVAB General composite was significantly different for these senior males and females.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

### General Math

Freshmen 1984-85. This sample, using the General composite score as the aptitude predictor variable, showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .010 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable freshmen females would be consistently underpredicted in their General Math grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Model 12, containing only the unit vector and the General composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

<u>Freshmen 1985-86</u>. For this sample, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Models 9 or 12, containing only the unit vector and the General composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by scphomores.

Sophomores 1985-86. This sample, using the General composite in the equations, showed statistically significant intercept differences between the male and female gender subgroups. With an  $R^2$  change of .039 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the General composite were used in the prediction of General Mat course grade, female sophomores would be consistently underpredicted on the criterion while male sophomores would be consistently overpredicted.

The results also showed no statistically significant slope or intercept differences between the White and Black ethnic group members regression lines. Thus, Model 12, containing the unit vector and the General composite score, could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the General composite score as the aptitude predictor variable, showed no statistically significant slope or intercept differences for the gender or White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the General composite score as the aptitude predictor variable, showed

statistically significant intercept differences between the male and female gender subgroups. With an  $\mathbb{R}^2$  change of .039  $(p \le .01)$  for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system. Thus, if a common regression line using the General composite were used in the prediction of General Math course grade, female juniors would be consistently underpredicted on the criterion while male juniors would be consistently overpredicted.

Using the General composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12, containing the unit vector and the General composite score, could be used in predicting Ceneral Math course grade for these individuals.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

## Algebra

Freshmen 1984-85. Using the ASVAB General composite as the predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two gender groups with an  $\mathbb{R}^2$  change of .041 (p<.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Freshmen 1985-86. With the General composite as the aptitude measure the results showed statistically significant intercept differences in the prediction equations for the two gender groups. These comparisons resulted in  $R^2$  change of .054 (p<.001) for the Model 8 vs Model 9 tests. Therefore, Model 8 would be the best prediction equation for this sample. Using this

composite, freshmen females would be consistently underpredicted in their Algebra grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

<u>Sophomores 1984-85</u>. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite sophomores, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Algebra course grade for these sophomores.

Sophomores 1985-86. In this sample, using the General composite, the results also showed statistically significant intercept differences for the gender group members. These tests resulted in an  $R^2$  change of .022 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Algebra grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using the General composite as the predictor resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1985-86 by sophomores.

<u>Juniors 1984-85</u>. In this 1984-85 sample, using the General composite score as the aptitude predictor variable, the results showed statistically significant intercept differences for the gender group members. These tests resulted in an  $\mathbb{R}^2$  change of

.044 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Black. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Algebra course grade for juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the General composite as taptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for these juniors.

At first, using this composite with this <u>Seniors 1984-85.</u> sample, gender differences were investigated by rot including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the General composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .049 (p<.01) for the Model 8 vs Model. 9 comparison, Model 8 would be the best prediction system for these Using this composite, senior females would be consistently underpredicted in their Algebra grades if the common regression line were used, while senior males would consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the ethnic group members, which in this sample were defined as White and Nonwhite. Thus, Model 12 could be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

#### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied

by not including the gender variables in the equations. These tests resulted in an  $\mathbb{R}^2$  change of .015 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Geometry grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using the General composite in the prediction equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the General composite in the equations resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .021 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the General composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including gender variables in the equations. With the General composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an R2 change of .040 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the General composite within the equations, the results showed statistically significant slope differences between the White and Black regression lines. The  $\mathbb{R}^2$  change for the Model 10 and Model 11 comparison was approximately .022

 $(p\leq .01)$ , with Model 10 being the best prediction equation for this sample's Geometry grade. Thus, the change in the Geometry grade per unit change in the ASVAB General composite was significantly different for these White and Black sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the General composite as the aptitude measure, the results showed statistically significant intercept differences for the gender group members. With an  $R^2$  change of .042 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for Geometry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

As in the Freshmen sample, using the General composite resulted in no statistically significant slope of intercept differences for the three ethnic groups. Model 12 could be used in the prediction of Geometry course grade for these sophomores.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. With the General composite as the aptitude measure, the results showed no statistically significant slope or intercept differences for the gender group members. Thus, Model 9 could be used in the prediction of Geometry course grades obtained by juniors during the 1985-86 school year.

When the model comparisons were made for ethnic group differences using the General composite, the results showed statistically significant slope differences for the gender group members. With an  $R^2$  change of .044 (p $\leq$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation for Geometry course grade for these juniors. The change in the Geometry grade per unit change in the ASVAB General composite was significantly different for these White and Nonwhite juniors.

Seniors 1984-85. At first, using this composite with this nample, gender differences were investigated by not including attnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the General composite equations resulted in no statistically

significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

### Calculus

Juniors 1985-86. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The General composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

## General Science

Freshmen 1984-85. Using the General composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the General composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by General score two-way interaction variables or the sex by General score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the General composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12, which contained the unit vector and the General composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

Sophomores 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $\mathbb{R}^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite sophomores, which were the ethnic groups

defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of General Science course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the General composite as the aptitude aptitude measure resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of General Science course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the General composite within the prediction equation resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Science course grade for these juniors.

With the General composite as the aptitude measure, the results showed statistically significant intercept differences for the two ethnic subgroups. With an  $R^2$  change of .062 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equation for Geometry course grade for these juniors. Using this composite, White juniors would be consistently underpredicted in their Geometry grades if the common regression line were used, while Black juniors would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the General composite, the results showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .021 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's General Science grade. Thus, using this composite, sophomore females would be consistently underpredicted in their General Science grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

This General composite prediction equation resulted in no statistically significant slope or intercept differences for the ethnic group members. Thus, Model 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

Seniors 1984-85. This sample tested only for gender group differences. Using the General composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB General composite, could be used in the prediction of General Science course grade for these seniors.

# Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the General composite within the prediction equation resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .025 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Biology grade. Thus, using this composite, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

This General composite equation also resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Biology course grades obtained by freshmen in 1984-85.

Freshmen 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups, with an  $\mathbb{R}^2$  change of .037 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable, freshmen females would be consistently underpredicted in their Biology grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black freshmen, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Biology course grade for these freshmen.

Using the General composite with this Sophomores 1984-85. sample, the results showed statistically significant differences between the Model 2 vs Model 4 and the Model 2 vs Model 5 comparisons. However, the Model 2 vs Model 6 comparsion showed that these two models were not significantly different. Model 6 included the unit vector, the General score by sex two-way interaction predictor variables, and the sex by ethnicity two-way interaction predictor variables. With Model 6 as the best prediction equation for this sample's Biology grade, differential validiy was evidenced for the ethnicity by General score two-way interaction variables, with ethnicity being defined as White, Black and Hispanic group membership.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. These tests resulted statistically significant slope differences between the gender group members and an  $R^2$  change of .016 (p $\leq$ .01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. Thus, the change in the Biology grade per unit change in the General composite was significantly different for freshmen males and females.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the three ethnic groups. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Biology course grade for these sophomores during this school year.

Juniors 1984-85. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .045 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Biology course grade for these juniors.

This sample tested only for gender group Juniors 1985-86. differences. Using the General composite as the predictor in statistically significant intercept variable resulted differences for the gender groups. With an R2 change of .065 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation of Biology course grade for these juniors. Using the General composite as the predictor variable, junior females would be consistently underpredicted in their Biology grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this General composite in the equations resulted in statistically significant intercept differences for the gender members. With an R2 change of .043 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equations for these seniors. females composite, senior would be consistently underpredicted in their Biology grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the General composite as the predictor composite, the results showed statistically significant intercept differences in the prediction equations for the White and Black ethnic groups, with an  $R^2$  change of .036 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using the General composite as the predictor variable, seniors consistently White would be underpredicted in their Biology grades if the common regression line were used, while Black seniors would be consistently overpredicted if a common regression line were used.

## Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the General composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these freshmen.

<u>Sophomores 1984-85</u>. This sample also tested only for gender group differences. Again, with the General composite in the equations, the results showed statistically significant intercept differences for the gender groups. With an  $R^2$  change of .038 (p<.01) for the Model 8 vs Model 9 comparison, Model 8 could be

used in the prediction of Chemistry course grades obtained by these sophomores. Sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. This sample tested only for gender group differences. Using the General composite as the predictor results statistically variable. the indicated significant intercept differences for the gender groups. With an R2 change of .058 (p≤.01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction system of Chemistry course grade for these sophomores. Using this composite, sophomore females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this General composite in the equations resulted in statistically significant intercept differences for the gender and two ethnic group members. With  $R^2$  changes of .074 and .021 (p<.01) for the Model 8 vs Model 9 and the Model 11 vs Model 12 comparisons, and 11 would be the best prediction equations for these juniors. Using this composite, junior females would consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used. Conversely, if a common regression line using the General composite as the aptitude measure were used in the prediction of Chemistry course grade, White juniors would be consistently underpredicted on this criterion while Nonwhite juniors would be consistently overpredicted.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of this statistically significant composite resulted in intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .086 (p $\leq$ .01) for the Model 8 vs Therefore, Model 8 would be the best Model 9 comparison. prediction equation for this sample. Using the General composite as the predictor variable, junior females would be consistently underpredicted in their Chemistry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results again showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Chemistry course grade for these juniors.

At first, using this composite with this Seniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the composite, the results showed no statistically General significant slope or intercept differences for the gender or White and Nonwhite ethnic group members. Model 9 or 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

## Physics I - II

<u>Juniors 1985-86</u>. This sample tested only for gender group differences. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the two junior gender groups, with an  $R^2$  change of .051 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable, junior females would be consistently underpredicted in their Physics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The General composite equations again resulted in statistically significant intercept differences for the gender groups. An  $R^2$  change of .074 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable, senior females would be consistently underpredicted in their Physics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The General composite equations again resulted in no statistically significant intercept differences for the gender groups. Model 9, containing the unit vector and the General composite score, could be used in the prediction of Government course grade for these individuals.

<u>Sophomore 1984-85</u>. This sample tested for gender group differences. Using the General composite as the predictor variable, the results showed statistically significant intercept differences for the gender groups. An  $R^2$  change of .039 (p $\leq$ .01) for the Model 8 vs Model 9 comparison was evidence; therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable, sophomore females would be consistently underpredicted in their Government grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Sophomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of this General composite in the equations resulted in statistically significant slope differences for the gender group members. With an  $R^2$  change of .016 (p $\leq$ .01) for the Model 7 vs Model 8 comparison, Model 7 would be the best prediction equation for these sophomores. Thus, the change in the Government grade per unit change in the General composite was significantly different for sophomore males and females.

The use of this General composite in the equations resulted in statistically significant intercept differences for the two ethnic group members. With  $R^2$  change of .019 (p<.01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction equations for these sophomores. Using this composite, White sophomores would be consistently underpredicted on this criterion if the common regression line were used, while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, the use of this General composite in the equations resulted in statistically significant intercept differences for only the gender subgroup. With  $R^2$  change of .034 (p $\leq$ .01) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these juniors. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Nonwhite juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained

only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

<u>Juniors 1985-86</u>. This sample, using the General composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With an  $R^2$  change of .049 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 was the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Government grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White and Black juniors, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Government course grade for these juniors.

Seniors 1984-85. Similar to some of the previous samples, using the General composite score as the aptitude predictor variable, resulted in statistically significant intercept differences for the gender group members. With  $R^2$  change of .023 (p $\leq$ .001) for the Model 8 vs Model 9 comparison, Model 8 would be the best prediction equation for these seniors. Using this composite, senior females would be consistently underpredicted in their Government grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

When ethnic group differences were investigated using this composite, the results showed no statistically significant slope or intercept differences for the White and Black ethnic group members. Again, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

### **History**

Freshmen 1984-85. The use of the ASVAB General composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .037 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the General composite score as the aptitude predictor variable, resulted in statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change or .015 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Plack ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the General composite score as the aptitude predictor variable, the results showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .028 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of History course grades obtained by sophomores during this school year.

Sophomores 1985-86. The use of this composite resulted in statistically significant intercept differences in the prediction equations for the gender groups, with an  $R^2$  change of .032 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the General composite as the predictor variable sophomore

females would be consistently underpredicted in their History grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score, the results showed no statistically significant slope or intercept differences for White, Black and Hispanic sophomores, which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of History course grade for these sophomores.

Juniors 1984-85. Like the 1985-86 freshmen sample, this sample, using the General composite score as the aptitude predictor variable, resulted statistically significant in intercept differences in the prediction equations for the two junior gender groups and resulted in an R2 change of .049 (p≤.001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the predictor variable, junior females would be consistently underpredicted in their History grades if the common regression line were used, while junior males would consistently overpredicted if a common regression line were used.

Again, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

At first, using this composite with this <u>Juniors 1985-86.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the General composite score as the aptitude predictor variable, the results statistically significant showed slope differences prediction equations for the two junior gender groups resulted in an R<sup>2</sup> change of .015 (p≤.01) for the Model 7 vs Model Therefore, Model 7 would be the best prediction 8 comparison. equation for this sample. The change in the History grade per unit change in the General composite was significantly different for freshmen males and females.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of History course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of the General composite in the prediction equations resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .017 ( $p \le .01$ ) for the Model 8 vs Model 9 comparison was evidenced. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their History grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Statistically significant intercept differences also resulted between the White and Black ethnic subgroups. With an  $\mathbb{R}^2$  change of .020 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the General composite as the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

# Foreign Language

<u>Freshmen 1984-85</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The results showed an  $R^2$  change of .071 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $\mathbb{R}^2$  change of .027 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the General composite within the equations, the results showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p<.01), with Model 7 being the best prediction equation for this sample's Foreign Language grade. Thus, the change in the Foreign Language grade per unit change in the ASVAB General composite was significantly difference for male and female freshmen.

The use of this ASVAB composite score in the equations also resulted in statistically significant intercept differences in the prediction equations for the White, Black and Hispanic ethnic groups and resulted in an  $R^2$  change of .012 (p $\leq$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, White and Hispanic freshmen would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black freshmen would be consistently overpredicted if a common regression line were used.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. When the model comparisons were made for gender group differences, using the General composite within the equations, the results again showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .104 (p≤.01), with Model 8 being the best prediction equation for this sample's Thus, sophomore females would be Foreign Language grade. consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using of this General composite in the prediction equations, the results also showed statistically significant intercept differences between the White, Black and Hispanic regression lines. The  $\mathbb{R}^2$  change for the Model 11 and Model 12 comparison was approximately .016 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Foreign Language grade. White and Hispanic sophomores would be consistently

underpredicted in their Foreign Language grades if the common regression line were used, while Black sophomores would be consistently overpredicted if a common regression line were used.

Sophomores 1985-36. Using the ASVAB General composite as the aptitude predictor in the equations showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .074 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences using of this General composite in the prediction equations, the results also showed statistically significant intercept differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 11 and Model 12 comparison was approximately .017 (p $\leq$ .01), with Model 11 being the best prediction equation for this sample's Foreign Language grade. White sopnomores would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Nonwhite sophomores would be consistently overpredicted if a common regression line were used.

At first, using this corposite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use as a predictor measure showed General composite statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .104 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, jun or females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

ethnic When the model comparisons were made for group differences, the General predictor composite also resulted in statistically significant intercept differences for the ethnic The R<sup>2</sup> change for the Model 11 vs Model 12 group members. comparison was .025 ( $p \le .01$ ); therefore, Model 11 would be the best prediction equation for these juniors' Foreign Language Using this composite White and Hispanic juniors course grade. would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while Black consistently overpredicted if a common juniors would be regression line were used.

At first, using this composite with this Juniors 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White Hispanic ethnic group differences were studied by not including the gender variables in the equations. The General prediction equations resulted in statistically significant intercept differences between the male and female regression The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .070 (p<.01), with Model 8 being the prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Foreign Language course grades obtained by juniors during this school year.

At first, using this composite with this <u>Seniors 1984-85.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, the General prediction equations resulted in statistically significant intercept differences between the male and female The R<sup>2</sup> change for the Model 8 and Model 9 regression lines. comparison was approximately .029 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language Thus, using this predictor composite, senior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The General composite prediction equations resulted in no statistically significant slope or intercept differences for the two ethnic groups. Model 12 could be used in the prediction of Foreign Language course grade for these individuals.

## Secretary and Office Education

Juniors 1985-86. This sample tested only for White and NonWhite ethnic group differences. Using the General composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the

ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB General composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested only for White and Nonwhite ethnic group differences. Again, using the General composite prediction equations the results showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB General composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

## Typing and Word Processing

At first, using this composite with this Freshmen 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. statistically prediction equations resulted in significant intercept differences between the male and female regression lines. The R2 change for the Model 8 and Model 9 comparison was approximately .024 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Typing grade. using this predictor composite, freshmen females would consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently everpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Comeral composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The General prediction equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .036 (p $\le$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, freshmen females would be consistently underpredicted in their Typing grades if the common regression line were used, while freshmen males would be consistently verpredicted if a common regression line were used.

When testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by freshmen during this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. statistically significant intercept results again showed differences between the male and female regression lines. change for the Model 8 and Model 9 comparison was approximately .056 (p≤.01), with Model 8 being the best prediction equation for sample's Typing grade. Thus, using this composite, sophomore females would be consistently underpredicted in their Typing grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by sophomores during this school year.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The General prediction equations showed no statistically significant slope or intercept differences for the gender or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the sophomore 1984-85 sample, the results showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .092 (p<.01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in

their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Black ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous sample, the results showed statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .052  $(p {\leq} .01)$ , with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Typing grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Again, when testing for ethnic group differences, the use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Thus, Model 12, which contained only the unit vector and the General composite score in the prediction equation, could be used in the prediction of Typing course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The General composite equations resulted in statistically significant intercept differences between the male and female regression lines. The  $R^2$  change for the Model 8 and Model 9 comparison was approximately .042 (p $\leq$ .01), with Model 8 being the best prediction equation for this sample's Typing grade. Thus, using this predictor composite, senior females would be consistently underpredicted in their Typing grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

#### Accounting and Bookkeeping

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. The use of the ASVAB General composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .061 (p<.01) for

the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

This sample also tested for gender group Juniors 1984-85. Again, using the General composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .121 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would bе consistently in their Accounting grades if underpredicted the common were regression line while junior males would used, consistently overpredicted if a common regression line were used.

Juniors 1985-86. This sample tested for gender group differences. As in the previous sample, using the General composite prediction equations, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .058 (p≤.01) for the Model 0 vs Model 0 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, junior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. Like the junior samples, this sample tested only for gender group differences. Using the General composite equations, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R2 change of .061 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, senior females would be consistently underpredicted in their Accounting grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not in ding ethnicity variables in the prediction equations. Then, the white and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB General composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an R2 change of .047

(p $\le$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would e the best prediction equation for this sample. Using this composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB General composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $R^2$  change of .061 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the General composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an  $R^2$  change of .069 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB General composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomore 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB General composite showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $R^2$  change of .070 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently

underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB General composite, the results statistically significant intercept differences in the prediction equations for the two ethnic groups. An R<sup>2</sup> change of .029 (p≤.01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor composite, White sophomores would be consistently underpredicted in their Home Economics grades if the common regression line were Nonwhice sophomores would consistently while be overpredicted if a common regression line were used.

<u>Schomores 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the General composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $R^2$  change of .072 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB General composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these sophomores.

At first, using this composite with this Juniors 1984-85. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the General composite prediction equations resulted in statistically significant intercept differences for the gender group members and resulted in an  $\mathbb{R}^2$  change of .042 (p $\leq$  01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB General composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Again, this sample, using the General composite equations, resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .138 (p<.01) for the Model 8 vs Model 9 comparison was evidenced; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB General composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the General composite equations resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .059 (p<.01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB General composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

# Computer Programming

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. Using the General composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $R^2$  change of .105 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite sophomore females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

<u>Juniors 1984-85</u>. Like the sophomore sample, this sample tested for gender group differences. Again, using the General composite as a predictor variable, the results showed statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .053 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Juniors 1985-86. The model comparisons tested only for gender group differences. Usin the ASVAB General predictor composite, the results showed statistically significant intercept differences in the prediction equations for the two junior gender groups and resulted in an R<sup>2</sup> change of .140 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample tested for gender group differences. The General composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB General composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

<u>Table 15.</u> Summary of Equity Findings for Prediction of High School Course Grades by General Composite

Course		Sex	Ethnicity	Sex*Ethnicity
English I-1	IV.			<del> </del>
Fresh	84-85	s	NS	ı
Fresh	85-86	s I	E	NS
				1
Soph	84-85	s	E	NS NS
Soph	85-86	S	1 -	NS
٦r	84-85	Ş	E	l NS
J٢	85-86	S	E	) NS
Sr 	84-85	S	E	NS
General Ma	th		7	
Fresh	84 - 85	1	E	NS
Fresh	85-86	E	E	NS
Soph	84 - 85	Ε	E	NS NS
Soph	85-36	ī	E	NS
٦٢	84-85	Ė	Ē	NS
٦٢	85-86	Ī	Ē	NS
Sr.	84 - 85	Ė	Ē	NS
Algebra				<del> </del>
Algebra	84 - 85	•		l ue
Fresh		1	E	NS NS
Fresh	85-86	I	E	NS
Soph	84-85	1	E	NS
Soph	85-86	1	E	NS NS
٦r	84-85	1	E	NS
J٢	85-86	E	E	NS
Sr	84 - 85	1	E	NS
Geometry				
Fresh	85 - 86	1	Ę	NS
Soph	84-85	1	E	NS
Soph	85-86	i	S	NS
Jr	84-85	i	E	NS
Ĵ٢	85-86	Ē	s	NS
\$r	84 - 85	Ë	E	NS
Calculus				1
Jr	85-86	Ε	NT	NS
				ļ
General Sc				
Fresh	84 - 85	NS	NS	1 1
Fresh	85-86	E	E	NS
Soph	84 - 85	1	E	NS
Soph	85-86	E	E	NS
J٢	84 - 85	E	1	NS
٦r	85-86	1	E	NS
Sr	84-85	E	N1	NS
Biology				
Fresh	84-85	1	E	NS
Fresh	85 - 86	i	E	NS
\$oph	84 - 85	٤	NS	I
Soph	85-86	S	E	NS NS
	84-85	i	E	
٦٢				NS NS
Jr S-	85 86	i .	NT	NS
Sr	84 - 85	1	1	NS NS

Note. NS = Not significant; 1 = Intercept differences; \$ = \$lope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 15. (Continued)

Course		Sex	Ethnicity	Sex*Ethnicity
Chemistry				
Fresh	85-86	E	NT	NS
Soph	84-85	i	NT	NS
Soph	85-86	:	NT	NS
Jr	84-85	Ĭ	1	NS
Jr	85-86	i	E	NS
Sr	84-85	Ė	Ē	NS
Physics			<b>+</b>	
J٢	85-86	1	NT	NS
Sr	84-85	1	NT	NS
Government	-			
Fresh	84-85	Ε	NT	NS
Soph	84-85	1	NT	NS NS
\$oph	85-86	Š	i i	NS
Jr 30pri	84 - 85	i	Ε	NS NS
Jr Jt	85 - 86	i	E	NS NS
Sr.	84-85	i	Ē	NS
History			<del></del>	<del> </del>
Fresh	84 - 85	1	ε	NS
Fresh	85-86	i	E	NS
Soph	84-85	i	E	NS
Soph	85-86	i	] E	NS
Jr	84-85	i I	E E	NS
٦٢	85-86	S	E	NS
3r	84-85	1	Ī	NS
Foreign Lar	201200			<del></del>
Fresh	84 - 85	1	ı	NS
Fresh	85-86	\$	i	NS
Soph	84-85	i	1	NS NS
	85-86	1		NS
Soph	84 - 85			
7[ 7[	85-86	j I	I E	NS NS
ur Sr	84-85	Ī	É	NS
Secretary (	& Ofc			<del>-</del>
Jr	85-86	NT	E	NS
Sr	84 - 85	NT	Ē	NS
				H3
Typing Fresh	84-85	1	F	NC
			E	NS
Fresh	85 - 86	1	E	NS
Soph	84-85	1	E	NS
Soph	85 - 86	E	E	NS NS
J۴	84 - 85	1	E	NS
٦r	85-86	1	E	NS
Sτ	84 - 85	1	NT NT	l NS

<u>Note</u>. NS  $\pi$  Not significant; I = Intercept differences; S  $\pi$  Slope differences; E = Equitable test, no significant slope or intercept differences found; NT  $\pi$  Not tested due to small sample sizes.

Table 15. (Concluded)

Course	i	Sex	Ethnicity	Sex*Ethnicity
Accounting				
Soph	85-8ó	1	NT	NS
J۲	84-85	1	NT	NS
Jr	85-86	I	NT	NS
S۲	84-85	1	NT	HS
Home Econor	nics			
Fresh	84-85	1	1	NS
Fresh	85-86	I	E	NS
Soph	84 - 85	1	1	NS
Soph	85-86	I	E	NS
Jr	84-85	I	E	NS
٦٢	د 85-85	1	E E E	NS
Sr	84-85	I	E	NS
Computer P	rogram			
Soph	85-86	1	l nt	NS
٦r	84-85	I	NT NT	NS NS
1L	85-86	1	NT	NS
Sr	84-85	Ε	NT	NS NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

# Subtest Weighted Composite

# English I - IV

Freshmen 1984-85. Using the Subtest weighted composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Subtest composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's English grade, no differential valualty was evidenced for the ethnicity by Subtest score two-way interaction variables or the sex by Subtest score two-way interaction variables.

<u>Freshmen 1985-86</u>. This composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $\mathbb{R}^2$  change of .009 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Subject composite as the predictor variable freshmen females would be consistently underpredicted in their English grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using this ASVAB composite resulted in no statistically significant slope differences among the White, Black and Hispanic regression lines. Thus Model 12, which contained the unit vector and the Subtest weighted score, could be used in the prediction of English course grades obtained by freshmen in this school year.

Sophomores 1984-85. When the model comparisons were made for gender group differences, using the Subtest weighted composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .005 (p $\leq$ .001), with Model 7 being the best prediction equation for this groups English grade. Thus, the change in the English grade per unit change in the ASVAB Subtest composite was significantly different for this year's sophomore males and females.

Using the Subtest composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for White, Black and Hispanic sophomores which were the ethnic groups defined in the prediction equations. Thus, Model 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of English course grade for these sophomores.

<u>Sophomores 1985-86</u>. The model comparisons for gender group differences using the Subtest weighted composite showed statistically significant slope differences between the male and female regression lines, with Model 7 as the prediction equation to be used for this sample. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .005 (p $\leq$ .001). Thus, the change in the English grade per unit change in the ASVAB Subtest composite was significantly different for these sophomore males and females.

Statistically significant intercept differences resulted among the White, Black and Hispanic ethnic subgroups. With an  $\mathbb{R}^2$  change of .010 (p $\leq$ .001) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Subtest composite were used in the prediction of English course grade, White and Hispanic sophomores would be consistently underpredicted on the criterion while Black sophomores would be consistently overpredicted.

<u>Juniors 1984-85</u>. When the model comparisons were made for gender group differences, using the Subtest weighted composite resulted in statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .006 (p $\le$ .001), with Model 7 being the best prediction equation for this group's English grade. Thus, the change in the English grade per unit change in the ASVAB Subtest composite was significantly different for these junior males and females.

Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for White, Black and Hisporic juniors. Thus, Model 12, which contained only the unit more and the Subtest composite score in the prediction equation could be used in the prediction of English course grade for the audividuals.

Juniors 1985-86. As in the 1984-85 school year, using the Subtest weighted composite in the equations showed statistically significant slope differences between the male and female regression lines. The  $R^2$  change for the Model 7 and Model 8 comparison was approximately .007 (p $\le$ .001), with Model 7 being the best prediction equation for English grade. Thus, the change in the English grade per unit change in the ASVAB Subtest composite was also significantly different for these junior males and females.

Again, using the Subtest composite score resulted in no statistically significant slope or intercept differences for the ethnic groups, with this sample including only White and Black individuals. Thus, Model 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of English course grade for these juniors.

Seniors 1984-85. The ASVAB Subtest composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two senior gender groups and resulted in an  $\mathbb{R}^2$  change of .007 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Subtest composite as the aptitude predictor variable senior females would be consistently underpredicted in their English grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

Using this ASVAB composite score in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Model 12 could be used in the prediction of English course grades obtained by seniors during this school year.

#### General Math

Freshmen 1984-85. This sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Thus, Models 9 or 12, which contain only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of

General Math course grades obtained by freshmen during this school year.

Freshmen 1985-86. As in the 1984-85 sample, the results showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Black. Again, Models 9 or 12 containing only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of General Math course grade for these freshmen.

Sophomores 1984-85. This sample also resulted in no statistically significant slope or intercept differences for the gender group members or the White, Black and Hispanic ethnic group members. Models 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of General Math course grades obtained during this year by sophomores.

Sophomores 1985-86. This sample, using the Subtest composite in the equations, showed no statistically significant slope or intercept differences between the gender or White and Black ethnic group members regression lines. Thus, Model 9 or 12 could be used in predicting General Math course grade for these individuals.

Juniors 1984-85. In this 1984-85 sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of General Math course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 containing the unit vector and the Subtest composite score could be used in the prediction of General Math course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the junior samples, the results showed no statistically significant slope or

intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of General Math course grades obtained in 1984-85 by seniors.

# Algebra

<u>Freshmen 1984-85</u>. Using the ASVAB Subtest composite as the predictor variable, the results showed no statistically significant slope or intercept differences in the prediction equations for the two gender groups or White and Nonwhite ethnic groups. Thus, Model 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Algebra course grade for freshmen during this school year.

Freshmen 1985-86. With the Subtest composite as the aptitude measure the results showed no statistically significant intercept differences in the prediction equations for the two gender groups and the White and Nonwhite ethnic groups. Again, Model 9 or 12 could be used in the prediction of Algebra course grades obtained by freshmen during the 1985-86 school year.

Sophomores 1984-85. In this 1984-85 sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the White and Nonwhite ethnic group members. Models 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Algebra course grades obtained in 1984-85 by sophomores.

Sophomores 1985-86. Using the ASVAB Subtest composite as the predictor variable, the results showed no statistically significant slope or intercept differences in the prediction equations for the two gender groups or White and Nonwhite ethnic groups. Thus, Model 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Algebra course grade for sophomores during this school year.

Juniors 1984-85. In this 1984-85 sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Black. Again, Models 9 or 12 could be used in the prediction of Algebra course grades obtained in 1984-85 by juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the

Subtest composite as the aptitude predictor resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Algebra course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the previous samples, using the Subtest composite in the equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Model 9 or 12 could be used in the prediction of Algebra course grades obtained by seniors in the 1984-85 school year.

### Geometry

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Again, using the Subtest composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Thus, Model 9 or 12 could be used in the prediction of Geometry course grades obtained by freshmen in the 1985-86 school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. As in the Freshmen sample, using the Subtest composite resulted in no statistically significant slope of intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Geometry course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. As in the previous samples, with the Subtest composite as the aptitude measure, the results showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an  $\mathbb{R}^2$  change of .012 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Subtest composite as the aptitude predictor variable sophomore females would be

consistently underpredicted in their Geometry grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Subtest weighted composite within the equations, showed statistically significant slope differences between the White and Black regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .022 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's English grade. Thus, the change in the Geometry grade per unit change in the ASVAB Subtest composite was significantly different for these White and Black sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The ASVAB Subtest composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two gender groups and resulted in an R change of .021 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using the Subtest composite as the aptitude predictor variable junior females would be consistently underpredicted in their Geometry grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Using the Subtest composite resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Geometry course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in some of the other Geometry samples, using the Subtest composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Geometry course grade for these juniors.

When the model comparisons were made for ethnic group differences, using the Subtest weighted composite showed statistically significant slope differences between the White and Nonwhite regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .038 (p<.01), with Model 10 being the best prediction equation for this sample's Geometry

grade. Thus, the change in the Geometry grade per unit change in the ASVAB Math composite was significantly different for these White and Nonwhite juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. In this sample, the Math composite equations also resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Geometry course grade for these seniors.

#### Calculus

<u>Juniors 1985-86</u>. This was the only Calculus sample which possessed more than 50 cases, and only gender group differences were tested. The Subtest composite, as the predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of Calculus course grade for these individuals.

# General Science

Freshmen 1984-85. Using the Subtest weighted composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Subtest composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's General Science grade, no differential validity was evidenced for the ethnicity by Subtest score two-way interaction variables or the sex by Subtest score two-way interaction variables.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12, which contained the unit vector and the Subtest composite score, could be used in the prediction of General Science course grades obtained by freshmen in 1985-86.

Sophomores 1984-85. In this 1984-85 sample, using the Subtest composite score as the aptitude predictor variable, the results also showed no statistically significant slope or intercept differences for the gender group members or the ethnic group

members, which in this sample were White and Nonwhite. Again, Models 9 or 12 could be used in the prediction of General Science course grades obtained by sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, using the Subtest composite as the aptitude aptitude measure, resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of General Science course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite within the prediction equation resulted in no statistically significant slope or intercept differences for the gender group members. Again, Model 9 could be used in the prediction of General Science course grade for these juniors.

The ASVAB Subtest composite as the aptitude predictor showed statistically significant intercept differences in the prediction equations for the two ethnic groups and resulted in an R2 change of .074 (p $\le$ .01) for the Model 11 vs Model 12 comparison. Therefore, Model 11 would be the best prediction equation for Using the Subtest composite as the aptitude this sample. White juniors would be consistently predictor variable underpredicted in their General Science grades if the common regression line were used, while Black juniors would consistently overpredicted if a common regression line were used.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This Subtest composite prediction equation also resulted in no statistically significant slope or intercet differences for the gender group or ethnic group members. As in the previous sample, Model 9 or 12 could be used in the prediction of General Science course grades obtained by juniors in 1985-86.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. Using the Subtest composite equation resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of General Science course grade for these seniors.

## Biology I - II

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. This Subtest composite equation also resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Biology course grades obtained by freshmen in 1985-86.

Freshmen 1985-86. The use of this ASVAB composite score resulted in no statistically significant slope or intercept differences for the gender groups or the White and Black ethnic group members. Thus, Model 9 or Model 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Biclogy course grades obtained by freshmen during this school year.

Sophomores 1984-85. Using the Subtest weighted composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Subtest composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's Biology grade, no differential validity was evidenced for the ethnicity by Subtest score two-way interaction variables or the sex by Subtest score two-way interaction variables.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite as the predictor variable resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Biology course grade for these sophomores.

Juniors 1984-85. The use of this ASVAB composite score resulted in no statistically significant slope or intercept differences for the gender groups or the White, Black and Hispanic ethnic group members. Thus, Model 9 or Model 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Biology course grades obtained by juniors during this school year.

Juniors 1985-86. This sample tested only for gender group differences. Using the Subtest composite as the predictor variable resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Biology course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The use of this Subtest composite in the equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 2 could be used in the prediction of Biology course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $\mathbb{R}^2$  change of .045 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Subtest composite as the aptitude measure were used in the prediction of Biology course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

#### Chemistry I - II

Freshmen 1985-86. This sample tested only for gender group differences. Using the Subtest composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Chemistry course grades obtained by freshmen in this year.

Sophomores 1984-85. This sample tested only for gender group differences. Again, with the Subtest composite in the equations, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Chemistry course grades obtained by these sophomores.

<u>Sophomores 1985-86</u>. This sample tested only for gender group differences. Using the Subtest composite as the predictor variable, the results indicated no statistically significant slope or intercept differences for the gender groups. Again, Model 9 could be used in the prediction of Chemistry course grade for these sophomores.

Juniors 1984-85. Using this ASVAB composite score as the aptitude predictor variable resulted in no statistically significant slope or intercept differences for the gender groups members. Thus, Model 9, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Chemistry course grades obtained by juniors during this school year.

When ethnic group differences were tested using this composite, the results showed statistically significant slope differences. With an  $R^2$  change of .015 (p $\le$ .01) for the Model 10 vs Model 11 comparison, Model 10 would be the best prediction equation for this group's Chemistry grade. Thus, the change in Chemistry grade per unit change in the Subtest composite score is significantly different for the White and Nonwhite juniors.

Juniors 1985-86. The use of the Subtest composite score resulted in no statistically significant slope or intercept differences for the gender groups or the White and Nonwhite ethnic group members. Again, Model 9 or Model 12 could be used in the prediction of Chemistry course grades obtained by juniors during this school year.

<u>Seniors 1984-85</u>. As in the previous samples using the Subtest composite, the results showed no statistically significant slope or intercept differences for the gender groups or the White and Nonwhite ethnic group members. Model 9 or Model 12 could be used in the prediction of Chemistry course grades obtained by seniors during this school year.

### Physics I - II

Juniors 1985-86. This sample tested only for gender group differences. Using the Subtest composite in the equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Physics course grades obtained during this year by juniors.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Subtest composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Physics course grade for these seniors.

## Government and Civics

Freshmen 1984-85. This sample tested only for gender group differences. The Subtest composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit

vector and the ASVAB Subtest composite, could be used in the prediction of Government course grades obtained by freshmen for this year.

Sophomore 1984-85. This sample tested for gender group differences. Again, using the Subtest composite as the predictor variable, the results showed no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Government course grade for these sophomores.

Sophomores 1985-86. The use of this ASVAB composite score as the aptitude measure resulted in no statistically significant slope or intercept differences for the gender group members. Thus, Model 9, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Government course grades obtained by sophomores during this school year.

Statistically significant intercept differences resulted between the White and Hispanic ethnic subgroups. With an  $R^2$  change of .018 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Subtest composite as the aptitude measure were used in the prediction of Government course grade, White sophomores would be consistently underpredicted on this criterion while Hispanic sophomores would be consistently overpredicted.

Juniors 1984-85. As in the previous sophomore sample, the use of the Subtest composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the gender groups or the White and Nonwhite ethnic group members. Model 9 or Model 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Government course grades obtained by juniors during this school year.

Juniors 1985-86. This sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12 could be used in the prediction of Government course grade for these juniors.

Seniors 1984-85. Similar to the previous samples, this sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Again, Models 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of Government course grades for these seniors.

# History

Freshmen 1984-85. The use of the ASVAB Subtest composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .012 (p $\leq$ .001) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, freshmen females would be consistently underpredicted in their History grades if the common regression one were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite in the equations resulted in no statistically significant slope or intercept differences for the White, Black and Hispanic ethnic group members. Thus, Model 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of History course grades obtained by freshmen during this school year.

Freshmen 1985-86. This sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus, Models 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of History course grade for these freehmen.

Sophomores 1984-85. In this 1984-85 sample, using the Subtest composite score as the aptitude predictor variable, the results also showed no statistically significant slope or intercept differences for the gender group members or the ethnic group members, which in this sample were White and Black. Again, Models 9 or 12 could be used in the prediction of History course grades obtained by sophomores.

Sophomores 1985-86. Using the Subtest weighted composite with this sample, the results showed no statistically significant differences between the Model 2 vs Model 4 comparison. Model 4 included the unit vector, the Subtest composite score, and the sex by ethnicity two-way interaction predictor variables, with ethnicity membership being defined as White, Black and Hispanic. With Model 4 as the best prediction equation for this sample's History grade, no differential validity was evidenced for the ethnicity by Subtest score two-way interaction variables or the sex by Subtest score two-way interaction variables.

Juniors 1984-85. Like the 1985-86 freshmen sample, this sample, using the Subtest weighted ASVAB composite score as the aptitude predictor variable, also resulted in no statistically significant slope or intercept differences for the gender group members or the White and Black ethnic group members. Thus,

Models 9 or 12, which contained only the unit vector and the Subtest composite score in the prediction equation, could be used in the prediction of History course grade for these juniors.

<u>Juniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite score as the aptitude predictor variable, the results showed statistically significant slope differences in the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .016 (p≤.01) for the Model 7 vs Model 8 comparison. Therefore, Model 7 would be the best prediction equation for this sample. Thus, the change in the History grade per unit change in the Subtest composite was significantly different for junior males and females.

Using the Subtest composite predictor variable resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of History course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Again, the use of the Subtest composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group members. Model 9 could be used in the prediction of History course grade for these seniors.

Statistically significant intercept differences resulted between the White and Black ethnic subgroups. With an  $\mathbb{R}^2$  change of .028 (p $\leq$ .01) for the Model 11 vs Model 12 comparison, Model 11 would be the best prediction system. Thus, if a common regression line using the Subtest composite of the aptitude measure were used in the prediction of History course grade, White seniors would be consistently underpredicted on this criterion while Black seniors would be consistently overpredicted.

## Foreign Language

Freshmen 1934-85. The use of the ASVAB Subtest composite as the aptitude predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .009 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the aptitude predictor variable, freshmen females would be consistently underpredicted in their Foreign

Language grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the equations resulted in statistically significant slope differences for the White, Black and Hispanic ethnic group members. With the  $R^2$  change for the Model 10 and Model 11 comparison approximating .008 (p $\leq$ .01), Model 30 would be the best prediction system for this sample. Thus, the change in the Foreign Language grade per unit change in the Subtest composite was significantly different for White, Black and Hispanic freshmen.

<u>Freshmen 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Foreign Language course grade for these freshmen.

Schhomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. equations weighted composite predictor statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .014 ( $p \le .01$ ), with Model 8 being the best prediction equation for this sample's Foreign Thus, using this composite as the aptitude Language grade. measure, sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, the use of this Subtest composite in the prediction equations resulted in no statistically significant slope or intercept differences for the ethnic group members. Therefore, Model 12, which contained the unit vector and the Subtest composite, could be used in the prediction of these sophomores' Foreign Language course grade.

<u>Sophomores 1985-86</u>. Using the ASVAB Subtest composite as the aptitude predictor in the equations showed statistically ignificant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an  $\mathbb{R}^2$  change of .016 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample.

Using this composite sophomore females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

The use of this ASVAB composite score in the prediction equations resulted in no statistically significant slope or intercept differences for the White and Nonwhite ethnic group members. Again, Model 12 could be used in the prediction of Foreign Language course grades obtained by sophomores during this school year.

<u>Juniors 1984-85.</u> At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. of the Subtest weighted composite as a predictor measure showed statistically significant intercept differences between the male and female regression lines. The R<sup>2</sup> change for the Model 8 and Model 9 comparison was approximately .026 (p≤.01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the model comparisons were made for ethnic group differences, using the Subtest composite within the equations, the results also showed statistically significant slope differences between the White, Black and Hispanic regression lines. The  $R^2$  change for the Model 10 and Model 11 comparison was approximately .017 (p $\leq$ .01), with Model 10 being the best prediction equation for this sample's Foreign Language grade. Thus, the change in the Foreign Language grade per unit change in the ASVAB Subtest composite was significantly different for these White, Black and Hispanic juniors.

At first, using this composite with this <u>Juniors 1985-86.</u> sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The use of the weighted composite as a predictor measure showed statistically significant intercept differences between the male The R<sup>2</sup> change for the Model 8 and and female regression lines. Model 9 comparison was approximately .024 (p $\le$ .01), with Model 8 being the best prediction equation for this sample's Foreign Language grade. Thus, using this predictor composite, junior females would be consistently underpredicted in their Foreign Language grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

The Subtest predictor equations resulted in no statistically significant slope or intercept differences for the ethnic group members. Again, Model 12 could be used in the prediction of Foreign Language course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Subtest composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Foreign Language course grade for these individuals.

## Secretary and Office Education

Juniors 1985-86. This sample tested only for White and Nonwhite ethnic group differences. Using the Subtest composite as the aptitude predictor variable, the result showed no statistically significant slope or intercept differences for the ethnic groups. Thus, Model 12, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of this course grade for these juniors.

Seniors 1984-85. This sample tested only for White and Nonwhite group differences. Again, using the Subtest composite prediction equations the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 12, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Secretary and Office course grades obtained by these seniors.

# Typing and Word Processing

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The Subtest composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Typing course grade for these freshmen.

Freshmen 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Hispanic ethnic group differences were studied by not including the gender variables in the equations. Like the previous sample, the Subtest composite prediction equations

resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grades obtained by freshmen for this school year.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White, Black and Hispanic ethnic group differences were studied by not including the gender variables in the equations. The results again showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite as the aptitude predictor variable, the results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The Subtest composite prediction equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these juniors.

Juniors 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Subtest composite in the equations resulted in no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Typing course grade for these juniors.

<u>Seniors 1984-85</u>. This sample tested only for gender group differences. The Subtest composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Typing course grades obtained by seniors for this year.

# Accounting and Bookkeeping

Sophomores 1985-86. This sample tested only for gender group differences. The use of the ASVAB Subtest composite as the predictor variable showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .018 (p<.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite as the predictor variable, sophomore females would be consistently underpredicted in their Accounting grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

Juniors 1984-85. This sample also tested for gender group differences. Using the Subtest composite prediction equations, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Accounting course grades obtained by juniors for this year.

Juniors 1985-86. This sample tested for gender group differences. Again, using the Subtest composite in the prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Accounting course grade for these juniors.

Seniors 1984-85. Like the junior samples, this sample tested for gender group differences. The use of the Subtest composite as a predictor variable resulted in no statistically significant slope or intercept differences for the gender groups. Again, Model 9 could be used in the prediction of Accounting course grade for these individuals.

#### Home Economics

Freshmen 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Black ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Subtest composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an R<sup>2</sup> change of .021 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. composite, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Subtest composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $R^2$  change of .061 (p $\leq$ .01) for the Model 11 vs Model 12 comparison was evidenced; and Model 11 could be used in the prediction of Home Economics course grade for these freshmen. Using this predictor composite, freshmen Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen Blacks would be consistently overpredicted if a common regression line were used.

At first, using this composite with this Freshmen 1985-86. sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Inen, the White and Nonwhite ethnic group differences were studied by including the gender variables in the equations. Using the Subtest composite as a predictor variable, the results showed statistically significant intercept differences for these two freshmen gender groups and resulted in an R2 change of .042 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. this composite as the aptitude measure, freshmen females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while freshmen males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Subtest composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these freshmen.

Sophomores 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The prediction equations with the ASVAB Subtest composite showed statistically significant intercept differences in the prediction equations for the two freshmen gender groups and resulted in an  $R^2$  change of .019 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Subtest composite, the results showed statistically significant intercept differences in the prediction equations for the two ethnic groups. An  $\mathbb{R}^2$  change of .038 (p≤.01) for the Model 11 vs Model 12 comparison was evidenced;

and Model 11 could be used in the prediction of Home Economics course grade for these sophomores. Using this predictor composite, sophomore Whites would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore Nonwhites would be consistently overpredicted if a common regression line were used.

Sophomores 1985-86. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. The use of the Subtest composite prediction equations resulted in statistically significant intercept differences for the gender group and ethnic group members. The ASVAB Subtest composite showed statistically significant intercept differences in the prediction equations for the two sophomore gender groups and resulted in an R2 change of .019 (p≤.01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite, sophomore females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while sophomore males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Subtest composite, the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Thus, Model 12, which contained the unit vector and the Subtest composite score, could be used in the prediction of Home Economics course grades obtained during this school year by sophomores.

Juniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. Using the Subtest composite equations, the results showed no statistically significant slope or intercept differences for the gender group or ethnic group members. Again, Model 9 or 12 could be used in the prediction of Home Economics course grade for these juniors.

<u>Juniors 1985-86</u>. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. However, this sample, using the Subtest composite equations, resulted in statistically significant intercept differences for the gender group members. An  $R^2$  change of .021 (p<.01) for the Model 8 vs Model 9 comparison was evidence; therefore, Model 8 would be the best prediction equation for this sample. Using this predictor composite junior females would be consistently underpredicted in

their Home Economics grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

When the tests for ethnic group differences were conducted using the ASVAB Subtest composite, the results indicated no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these juniors.

Seniors 1984-85. At first, using this composite with this sample, gender differences were investigated by not including ethnicity variables in the prediction equations. Then, the White and Nonwhite ethnic group differences were studied by not including the gender variables in the equations. As in the junior 1985-86 sample, the Subtest composite equations resulted in statistically significant intercept differences for the gender group members. An  $\mathbb{R}^2$  change of .020 (p $\leq$ .01) was obtained for the Model 8 vs Model 9 comparison; therefore, Model 8 would be the best prediction equation for this sample. Using this composite senior females would be consistently underpredicted in their Home Economics grades if the common regression line were used, while senior males would be consistently overpredicted if a common regression line were used.

The tests for ethnic group differences were conducted using the ASVAB Subtest composite, and the results showed no statistically significant slope or intercept differences in the prediction equations for the two ethnic groups. Model 12 could be used in the prediction of Home Economics course grade for these seniors.

# Computer Programming

Sophomores 1985-86. This sample tested only for gender group differences. Using the Subtest composite as a predictor variable, the results showed no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Computer Programming course grades obtained by sophomores for this year.

Juniors 1984-85. Like the sophomore sample, this sample tested for gender group differences. Again, the Subtest composite equations resulted in no statistically significant slope or intercept differences for the gender groups. Model 9 could be used in the prediction of Computer Programming course grade for these juniors.

Juniors 1985-86. This model tested only for gender group differences. Using the ASVAB Subtest predictor composite, the results showed statistically significant intercept differences in

the prediction equations for the two junior gender groups and resulted in an  $R^2$  change of .031 (p $\leq$ .01) for the Model 8 vs Model 9 comparison. Therefore, Model 8 would be the best prediction equation for this sample. Using this composite junior females would be consistently underpredicted in their Computer Programming grades if the common regression line were used, while junior males would be consistently overpredicted if a common regression line were used.

Seniors 1984-85. As in the previous Computer Programming samples, this sample tested for gender group differences. The Subtest composite prediction equations resulted in no statistically significant slope or intercept differences for the gender groups. Thus, Model 9, which contained the unit vector and the ASVAB Subtest composite, could be used in the prediction of Computer Programming course grades obtained by seniors for this year.

Table 16. Summary of Equity Findings for Prediction of High School Course Grades by Subtest Weighted Composite

Course		Sex	Ethnicity	Sex*Ethnicity
English I-1	v			
Fresh	84-85	NS	NS	i
Fresh	85 86	!	¦ E	NS
Soph	84-85	S	į E	NS
Soph	85-86	\$	1	NS
Jr	84-85	S	E	NS
Jr	85-86	S	E	NS
Sr	84 - 85	1	E	NS
General Mat	th			
Fresh	84 - 85	E	E	NS
Fresh	85-86	E	E	l NS
Soph	84-85	E	E	NS
Soph	85-86	Ε	E	NS
Ĵ۲	84 - 85	E	E	NS
16	85-86	ε	E	NS
Sr	84-85	F.	E	NS
Algebra				
Fresh	£4-85	E	E	NS
Fresh	35-86	Ε	E	NS
	84-85	Ē	E	NS
Soph	85 - 86	Ē	Ę.	NS
Ĵ٢	84 - 85	Ε	E	NS
J٢	85-86	E	E	KS
Sr	84 - 85	E	E	NS
Geometry				
Fresh	85-86	E	E	NS
Soph	84 85	E	F.	NS
Soph	85-86	ī	l s	NS
J۲	84 - 85	1	F	NS
٦٢	85-86	Ė	F \$	NS
Sr	84 - 85	Ē	E	NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 16. (Continued)

Course		Sex	Ethnicity	Sex*Ethnicity
Calculus			<del>                                     </del>	<del> </del>
J٢	85-86	Ε	NT	NS
General Sci	ence		<del></del>	<del> </del>
Fresh	84-85	NS	NS	1
Fresh	85-86	Ē	Ë	NS
Soph	84 - 85	Ē	Ē	NS
Soph	85-86	Ē	Ē	NS
Jr	84-85	Ē	1	NS
J٢	85 - 86	Ē	E	NS
Sr	84 - 85	E	NT	NS
Biology			<del></del>	<del></del> -
Fresh	84-85	Ε	E	NS
Fresh	85 - 86	Ē	Ē	NS
Soph	84-85	HS	NS	i
Soph	85-86	E	E	NS
Jr	84-85	Ē	Ē	NS
Jr	85 - 86	Ē	NT	NS
<b>S</b> r	84 - 85	Ē	i	NS
Chemistry		·		
Fresh	85-86	E	NT	NS
Soph	84 - 85	Ē	NT	NS
Soph	85-86	Ē	NT	NS
J٢	84 - 85	Ē	s	NS
٦Ĺ	85-86	Ē	E	NS
Sr	84-85	Ē	Ē	NS
Physics		<del></del> .		
Jr	85-86	E	NT	NS
<b>S</b> r	84-85	E	NT	NS
Government				
Fresh	84-85	E	NT	NS
Soph	84-85	Ē	NT	NS
Soph	85-86	Ē	ï	NS
Jr	84 - 85	Ē	É	NS
Ĵ٢	85-86	Ē	E	NS
\$r	84 - 85	Ē	Ē.	NS
History			-	
Fresh	84-85	ī	E	NS
Fresh	85-86	Ė	Ē	NS
Soph	84-85	Ē	Ē	NS
Soph	85-86	NS	NS	1
Jr	84-85	E	E	NS
٦r	85-86	Š	Ē	NS
Sr	84-85	Ε	1	NS
foreign Lar	nguage	··		<del></del>
Fresh	84-85	ı	s	NS
Fresh	85-86	Ē	٤	NS
Soph	84 - 85	Ī	Ē	NS
Soph	85-86	1	E	NS
٦r	84-85	i	s	NS
J٢	85 - 86	Ī	Ē	KS
Sr	84 - 85	Ė	E	NS
Secretary 8	Ofc	<del></del>	<del></del>	
Jr	85-86	NT	E	NS

<u>Note</u>. NS = Not significant; I = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

Table 16. (Concluded)

Course		Sex	Ethnicity	Sex*Ethnicity
Typing				
Fresh	84-85	E	E	NS
Fresh	85-86	E	E	NS
Soph	84 - 85	E E	E	NS
Soph	85-86	E	j E	NS
٦٢	84 - 85	E E	E	NS
٦٢	85-86	Ε	) E	) NS
Sr	84 - 85	E	NT	NS
Accounting				
Soph	85-86	1	NT	NS
٦r	84 - 85	E	NT	NS
16	85-86	E	NT	NS
\$r	84-85	E	NT	NS
Home Econor	nics			
Fresh	84-85	1	l i	NS
Fresh	85-86	1	E	NS
Soph	84-85	1	E 1	NS
	85-86	I	Ε	NS
ðr.	84-85	E	E	NS
J٢	85-86	1	E	NS
\$r	84-85	1	Ε	NS
Computer P	rogram			
Soph	85-86	E	NT	NS
J٢	84-85	Ε	NT	NS
J٢	85-86	I	NT	NS
\$r	84-85	E	NT	NS

<u>Note</u>. NS = Not significant; ! = Intercept differences; S = Slope differences; E = Equitable test, no significant slope or intercept differences found; NT = Not tested due to small sample sizes.

#### IV. DISCUSSION

## Sample Characteristics

In comparing the average aptitude composite scores of the gender and ethnic subgroups, the analysis resulted in outcomes which were expected. That is, Whites, on the average, obtained higher scores on composites than minority ethnic group members. White and minority males obtained higher composite scores, on the average, on composites containing quantitative or mechanical subtests, while the female counterparts obtained higher mean scores in composites which included verbal and speeded subtest.

#### General Linear Models Tests

Thirty samples included both ethnic and gender information in the initial full Model 1. Within these 30 samples, only 12 samples had enough subjects to investigate the contribution of male, female, White, Black, and Hispanic group membership in the prediction of course grade. Eleven samples allowed for the investigation of male, female, White, and Black subgroup male,

information, while seven samples allowed for the investigation of female, White and Nonwhite variable contributions in the prediction of final course grade.

Forty-five samples had enough cases to inventigate the contribution of only the ethnicity variables in the prediction of course grade. Of these 45 samples, nine allowed for the study of the White, Black, and Hispanic group pembership. Twelve samples allowed for the investigation of White and Black group membership, while only four samples allowed for the study of White and Hispanic group membership. The ray samples and enough cases to investigate the contribution of a White and NonWhite ethnicity variables in the prediction of area grade. Sixt -two samples had enough cases to investigate the contribution of area grade.

Referring to Appendix D, Figures 1 3, 1 48 of 6 Model 1 .s. comparisons resulted in statistically significant Model differences between the full and restricted models Thus meant all samples with all composite predictors resulted in a failure to reject the null hypothesis, which stated that the expected differences in course grades between the differences of White males and Black males at a given ASVAB score was equal to the differences between the differences at very other ASVAB score Differences between slopes (i.e., change in grade per level. unit change in ASVAB composite score) were constant across ethnic Slopes for each ethnic group were different, but the differences between the slopes was constant.

Subsequent model comparisons revealed that none of the ASVAB composites showed a systematic pattern of slope or intercept differences across the various samples. However, there were isolated occurrances of statistically significant slope and/or intercept differences for sex or ethnic groups within a particular composite for some course samples. For example, the Academic Ability composite showed a pattern of statistically significant slope differences between the gender groups for mathematics type courses, such as General Math and Algebra. pattern did not continue with regard to Geometry. A consistent pattern of no test bias was evidenced for the ASVAB composites with regard to the Calculus and Secretary and Office courses. The classification of students and the year course grades were obtained did not appear to have systematic patterns within ASVAB composites or across courses. Thus, none of the composites, across the course samples, demonstrated a particular type of systematic bias against a particular gender or ethnic group.

When significant intercept differences between the gender groups did occur, each ASVAB composite consistently underpredicted females on criterion performance if a common regression line were to be used. In a similar fashion, when significant intercept differences for the ethnic groups were found, Whites or Hispanics were consistently underpredicted on

the criterion performance if a common regression line were used, while Blacks or Nonwhites were overpredicted. The exception to this case was with the Biology course samples, in which Blacks would be underpredicted in Biology course grade if a common regression were used.

In general, certain ASVAB composites would result in significant slope and intercept differences if used in the prediction of particular course grades. Thus, future research is warranted in the investigation of the equity of the high school ASVAB composites, as well as the other composites included in this study.

Future research could investigate the degree of variance within the criterion which could be accounted for by other predictor variables. Such factors as selective enrollment into certain courses, teacher grading styles, and curriculum differences across schools could lead to differential prediction between the subgroups of interest. One way to investigate these aspects of the criterion is to include a "school" vector among the predictors or as a stratification variable in defining the This would eliminate some of the interpretation samples. statistically significant slope or intercept problems with differences between groups of interest.

Future research could also investigate a change in the initial Model 1 vs. Model 2 comparison. This comparison could be altered such that the initial full Model 1 contained all single and interaction variables, while Model 2 excluded all interaction variables except for the sex by ethnicity interaction variable. This could lead to a clearer interpretation of results which test the hypothesis that all slopes are equal for the six groups. The more specific model comparisons for sex and ethnicity slope and intercept differences could then be made and interpreted.

Finally, a consideration for future investigations would be a test for a curvilinear relationship among the variables instead of using a lower level of significance for alpha. This would provide a clearer picture of whether the variables did possess a linear relationship as assumed. Also, to maintain the spirit of sequential testing, Model 3 could be compared to Models 7 and 10. This would eliminate the need to assume that the coefficients associated with the sex by ethnicity interaction variables are equal to zero.

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## APPENDIX A: DEFINITIONS OF PREDICTOR VARIABLES

Table A-1. Definition of Predictor Variables

Vari <b>able</b> s	Description	Code
1	Aptitude Score	ASVAB Composite Score
·	Aprilade seore	ASTAB COMPASTICE SCOTE
2	Sex Group Membership (included in Types 1-4 and 9 starting Models) <sup>b</sup>	1 if Male; O Otherwise
3	Ethnic Group Membership1 (included in Types 1-8 starting Models)	1 if White; O Otherwise
4	Ethnic Group Membership2 (included in Types 1 and 5 starting Models)	1 if Black; O Otherwise
5	Sex x Ethnicity 1	v1 * v3
6	Sex x Ethnicity 2	V1 * V4
7	Aptitude x Sex	V1 * V2
8	Aptitude x Ethnicity 1	V1 * V3
9	Aptitude x Ethnicity 2	V1 * V4
10	Aptitude a Sex a Ethnicity 1	v1 * v2 * v3
11	Aptitude x Sex x Ethnicity 2	V1 * V2 * V4
12	Male Gender Group (used in Models 4, 5, and 6) <sup>c</sup>	1 if male; O Otherwise
13	Female Gender Group (used in Models 4, 5, and 6)	1 if female; O Otherwise
14	White Ethnic Group (used in Models 4, 5, and 6)	1 if White; C Otherwise
15	Black Ethnic Group (used in Models 4, 5, and 6 if enough subjects)	1 if Black; O Otherwise
16	Hispanic Ethnic Group  (used in Models 4, 5, and 6 if enough subjects)	1 if Hispanic; O Otherwise
17	Monwhite Ethnic Group (used in Models 4, 5, and 6 if necessary)	1 if Norwhite; O Otherwise
18	Aptitude x Hale (used in Models 4, 5, and 6)	V1 • V12
19	Aptitude x Female (used in Models 4, 5, and 6)	V1 * V13

<u>Table A-1</u>. (Concluded)

Variables	Description	Code
20	Male x White	V12 * V14
	(used in Models 4, 5, and 6)	
21	Male x Black	V12 * V15
	(used in Models 4, 5, and 6 if enough subjects)	
22	Male x Hispanic	V12 * V16
	(used in Models 4, 5, and 6 ir enough subjects)	
23	Male x Nonwhite	viz - Vir
	(used in Models 4, 5, and 6 of necessary)	
24	Female x White	V13 * V14
	(used in Hodels 4, 5, and 6)	
25	Female x Black	V13 * V15
	(used in Models 4, 5, and 6 if enough subjects)	
<b>د</b> ه	Female x Hispanic	V13 * V16
	(used in Models 4, 5, and 6 if enough subjects)	
27	Female x Nonwhite	V13 * V17
	(used in Models 4, 5, and 6 if necessary)	
28	Aptit∪de x Male x White	V1 * V20
	(used in Models 4, 5, and 6)	
29	Aptitude x Male x Black	v1 * v21
	(used in Models 4, 5, and 6 if enough subjects)	
30	Aptitude x Male x Hispanic	V1 * V22
	(used in Models 4, 5, and 6 if enough subjects)	
31	Aptitude x Male x Nonwhite	V1 • V23
	(used in Models 4, 5, and 6 if necessary)	
32	Aptitude x Female x White	V1 * V24
	(used in Models 4, 5, and 6)	
33	Aptitude x Female x Black	V1 * V25
	(used in Models 4, 5, and 6 if enough subjects)	
34	Aptitude x Female x Hispanic	V1 * V26
J.,	(used in Models 4, 5, and 6 if enough subjects)	*
35	Aptitude & Female x Nonwhite	VI • V27
,,	(used in Models 4, 5, and 6 if necessary)	V1 • V27

<sup>&</sup>lt;sup>8</sup>The unit vector is assumed.

bsee Table 4 for numbers that indicate type of possible starting model.

 $<sup>^{\</sup>mathsf{C}}\mathsf{See}$  Appendix B for Models 4, 5, and 6 composition.

## APPENDIX B: MODEL SPECIFICATIONS WITH HYPOTHESES OF INTEREST AND HIERARCHICAL MODEL TESTS

Table 8-1. Model Specifications<sup>a</sup>

Model no.	Predictor Variables <sup>b</sup>	Description			
1 (initial full model with ethn= Wh, Bl, His; gender= m, f) <sup>C</sup>	V1-V11	ASVAB, sex, ethn 1, ethn 2, sex * ethn 1, sex * ethn 1, sex * ethn 2, ASVAB * sex, ASVAB * ethn 1, ASVAB * sex * ethn 2, asvaB * sex * ethn 2, asvaB * sex * ethn 2, asvaB * sex * ethn 2			
(initial full model with ethn= Wh, Bl or Wh, His; gender= m, f)	V1-V11	ASVAB, sex, ethn 1, sex * ethn 1, ASVAB * sex, ASVAB ^ ethn 1, ASVAB * sex * ethn 2			
<pre>(initial full moder with   ethn= Wh, worsh;   gender= m, f)</pre>	V1-V3, V5, V7, V8, V10	ASVAB, sex, ethn 1, sex * ethn 1, ASVAB * sex, ASVAB * ethn 1, ASVAB * sex * ethn 1			
2	V1, V2, V3 and/or V4 V5 and/or V6, V7, V8 and/or V9	ASVAB, sex, ethn <sup>o</sup> , sex r ethn, ASVAB * sex, ASVAB * Thn			
3	V1, V2, V3 and/or V4, V7, V8 and/or V9	ASVAB, sex, ethn, ASVAB * sex, ASVAB * ethn			
4	V1, V5 and/or V6	ASVAB, sex, ethn			
5	V5 and/or V6, V7	ASVAB * ethn, sex * ethn			
6	Vy and/or V6, V7	ASVAB * sex, sex * ethn			
7 (initial full model if only groder differences tested; ethn not tested)	V1, V2, V7	ASVAB, sex, ASVAB * sex			
8	v1, v2	ASVAB, sex			
ç	Vi	VZAVB			
10 (initial full model if only ethn differences tested; ethn = Wh, Bl, Ris; yerder not tested)	V1, V3, V4 V8, V9	ASVAB, ethn 1, ethn 2 ASVAB * ethn 1, ASVAB * ethn 2			

<u>Table B-1</u>. (Concluded)

icdel no.	Predictor variables <sup>b</sup>	Description
(initial full model if only ethn differences tested; ethn= Wh, B <sup>1</sup> , His; gender not tested)	V1, V3, V4, V8	ASVAB, ethn 1, ASVAE * ethn 2
<pre>(initial full model i: only   ethn differences tested;   ethn= Wh, Nonwh;   gender not tested)</pre>	V1, V3, V4, V8	ASVAB, ethn 1, ASVAB * ethn 2
11	V1, V3, and/or V4	ASVAB, ethn <sup>d</sup>
12	V1	ASVAB

The unit vector is assumed.

<sup>&</sup>lt;sup>b</sup>Variables numbers referenced in Table A-1.

<sup>&</sup>lt;sup>C</sup>ethn=ethnicity; Wh=Whites, Bl=Black, His=Hispanic, Nonwh=Nonwhite.

 $<sup>\</sup>ensuremath{\text{d}_{\text{E}}}\xspace$  thinicity being defined according to which initial full model was used.

Table B-2. Hypotheses of Interest

Medec Companison	Mathematical Hypothesis <sup>a</sup>	Natural Language Hypothesis			
	Model 1 vs. Model 2				
1. y = u + sex + ethn + ASVAB +	(WM <sub>ai</sub> - 6M <sub>ai</sub> ) - (WF <sub>ai</sub> - 3F <sub>ai</sub> )= (WM <sub>aj</sub> - 6M <sub>aj</sub> ) - (WF <sub>aj</sub> - 8F <sub>aj</sub> )	Expected differences of White males and Black males at a given ASVAB score is equal to the differences			
(sex * ethn) + (sex * ethn * ASVAB)	and  (WMai - HMai) - (WFai - HFai)=	other ASVAB score level.  Differences between slopes is			
2. y = u + sex + ethn + ASVAB + (sex * ASVAB) + (ethn * ASVAB) +	(WMaj - HMaj) - (WFaj - HFaj) thus	constant across ethnic groups.			
(sex * ecim)	(BM <sub>ai</sub> - HM <sub>ai</sub> ) - (Bf <sub>ai</sub> - Hf <sub>ai</sub> )= (BM <sub>aj</sub> - HM <sub>aj</sub> ) - (Bf <sub>aj</sub> - Hf <sub>Ej</sub> )				
	Model 2 vs. Model 3				
2. y = u + sex + ethn + ASVAB +	$(WM_{a1} + BM_{ai}) + (WF_{ai} + BF_{ai}) = 0$ and	Differences between expected values for males and females at a given ASVAB score are constant across ethnic groups. Conversely,			
3. y = u + sex + ethn + ASVAB +	$(WM_{ai} - HM_{ai}) \cdot (WF_{ai} - HF_{ai}) = 0$ and $(BM_{ai} - HM_{ai}) \cdot (BF_{ai} \cdot HF_{ai}) = 0$	differences between the expected values of ethnic groups at a give ASVAB score are constant across gender groups.			
	Model 2 vs. Model 4				
2. y = M + F + W + B + H +  ASVAB + (M * ASVAB) +  (F * ASVAB) + (W * ASVAB) +  (B * ASVAB) + (H * ASVAB) +  (M * W) + (F * W) +  (M * B) + (F * B) +  (M * H) + (F * H)	wm <sub>ai</sub> - wm <sub>aj</sub> = wF <sub>ai</sub> - wF <sub>aj</sub> or 6M <sub>ai</sub> - BM <sub>aj</sub> = BF <sub>ai</sub> · BF <sub>aj</sub> or	Tests that there is no interaction between ASVAB and each of the categorical variables (i.e., sex and ethnicity). Differences between the expected values for all six sex and ethnicity categories are constant.			
СL	BMai - HMaj = HFai - HFaj				
y = M + F + W + B(OF H, OF NW) +  ASVAB + (M * ASVAB) +  (F * ASVAB) + (W * ASVAB) +  (B(OF H, OF NW) * ASVAB) +  (M * W) + (F * W) +  (M * B(OF H, OF NW)) +  (F * B(OF H, OF NW))					

Table B-2, (Continued)

Mathematical Hypothesis $^{\mathbf{a}}$ Model Comparison Natural Language Hypothesis Model 2 vs. Model 4 4. y = ASVA8 + (M \* W) + (F \* W) + (M \* B) + (F \* B) + (M \* H) + (F \* H) v = ASVAB + (M \* W) + (F \* 4) + (M \* B(or H, or NV)) + (F \* B(OF H, OF NW)) Model 2 vs. Model 5 2. y = M + f + W + 8 + H + Mwai = ƙwai Tests that male and female slopes ASVAB + (M \* ASVAB) + are equal. Differences of expected (F \* ASVAB) + (W \* ASVAB) + and values of White males and White (8 \* ASVAB) + (H \* ASVAB) + females are constant across all Maai = Faai (M \* W) + (F \* W) + ASVAB levels. Differences of (M \* 8) + (F \* B) +expected values of Black males and (M \* n) + (f \* n) females are constant across all and ASVAB levels. M<sub>Hai</sub> = f<sub>Hai</sub> y = M + F + W + B(or H, or NW) + ASVAB + (M \* ASVAB) + (F \* ASVAB) + (W \* ASVAB) + (B(or H, or NW) \* ASVAB) + (M + H) + (F + H) +(M \* B(or H, or N₩)) + (F \* B(or H, or NW)) 5. y = (ASVAB \* W) + (ASVAB \* B) +(ASVAB \* H) + (M \* W) + (F \* W) + (M \* B) + (F \* G) + (M \* H) + (F \* H) : r y = (AS/AB \* W) + (ASVAB \* B(or H, or NW)) + (M \* W) + (F \* W) + (M \* B(or H, or NW)) + (f \* B(or h, or NW))

<u>Table 8-2</u>. (Continued)

Model Comparison	Mathematical Hypothesis <sup>a</sup>	Natural Language Hypothesis
	Model 2 vs. Model 6	
2. y = M + F + W + B + H + ASVAB + (M * ASVAB) +	W <sub>mai</sub> = B <sub>mai</sub>	Tests that ethnic group slopes are equal. Differences of expected
(F * ASVAB) + (W * ASVAB) + (B * ASVAB) + (H * ASVAB) +	and	values of White and Black males are constant across all ASVAB
(M * W) + (F * W) + (M * B) < (F * B) +	Wfai = Bfai	levels. Differences of expected values of White and Hispanic males
(M * H) + (F * H)	and	are constant across all ASVAB levels. Differences of expected
or	W <sub>rea</sub> ; = E <sub>ma</sub> ;	values of White and Black females are constant across all ASVAB
y = M + F + W + B(or H, or NW) + ASVAB + (M * ASVAB) +	and	levels. Differences of expected values of White and Hispanic
(F * ASVAB) + (W * ASVAB) + (B(Or H, Or NW) * ASVAB) + (M * W) + (F * W) + (M * B(Or H, Or NW)) + (F * B(Or H, Or NW))	¥fai = ∺fai	females are constant across all all ASVAB levels.
5. y = (M * ASVAB) + (F * ASVAB) + (M * W) + (F * W) + (M * B) + (F * B) + (M * H) + (F * II)		
or		
y = (M * ASVAB) + (F * ASVAB) + (M * W) + (F * W) + (M * B(Or H, Or NW)) + (F * B(Or H, Or NW))		
	Model 7 vs. Model 8	
7. y = u + ASVAB + sex + (sex * ASVAB)	M <sub>ai</sub> · F <sub>ai</sub> = M <sub>aj</sub> · F <sub>aj</sub>	Assumes coefficients for sex * ethnicity variables are equal to 0 Tests that male and female slopes
8. y = u + ASVA8 + sex		are equal. Differences of expecte values of male and female are constant across all ASVAB levels.
	Model & vs. Model 9	
8. y = u + ASVA9 + sex	M <sub>ai</sub> = F <sub>ai</sub>	Tests that male and female regression lines intercept the
V. y = u + ASVAB		y axis (i.e. criteria) at equal points. Differences of expected values of male and female are constant across all ASVAB levels

Table B-2. (Concluded)

Model	Comparison	Mathematical Hypothesis <sup>8</sup>	Natural Language Hypothesis
		Model 10 vs. Model 11	
10. y	y = ASVAB + ethn + (ethn * ASVAB)	Wai - Bai = Waj - Baj	Assumes coefficients for sex * ethnicity variables are equal to 0.
		and	Tests that ethnic groups slopes are
11. y	y = u + ASVAB + ethn		equal. Differences of expected
		Wai - Hai = Waj - Haj	values of Whites and Blacks are constant across all ASVAB levels.
			Differences of expected values of
			White and Hispanic are constant
			across all ASVAB levels.
		Model 11 vs. Model 12	
11.	y = u + ASVAR + ethn	Wai = Bei	Tests that ethnic group regression
			lines intercept the y axis (i.e.,
12.	y = u + ASVAB	and	criteria) at equal points. Assumes
			differences of expected values of
		Wai = Hai	Whites and Blacks are constant and
			expected values of Whites and
			Hispanics are constant.

<sup>&</sup>lt;sup>a</sup>Using all three ethnic groups for illustrative purposes; with W=White, B=Black, H=Hispanic, M=Males, F=Females, ai=a given ASVAB score level, and aj=another given ASVAB score level.

Figure B-1. Hierarchical F-Test Comparisons (Aptitude by Sex by Ethnicity)

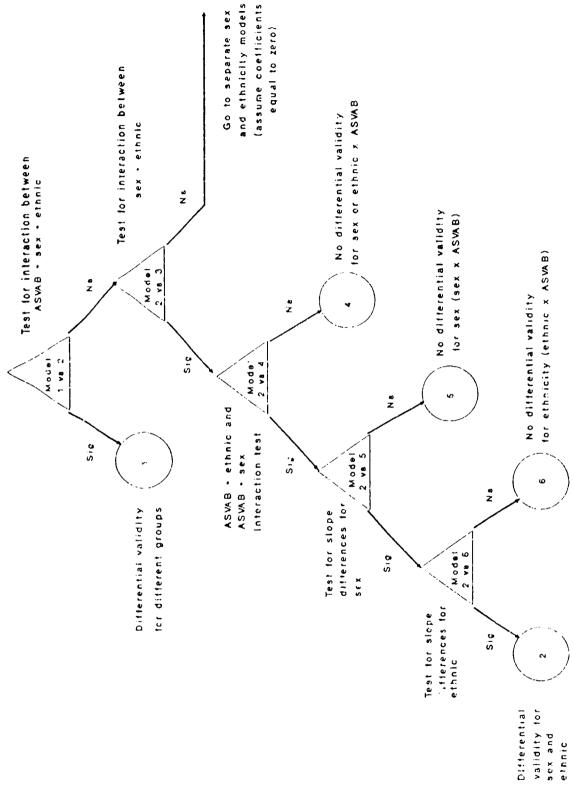


Figure B-2. Hierarchical F-Test Comparisons (Aptitude by Sex.)

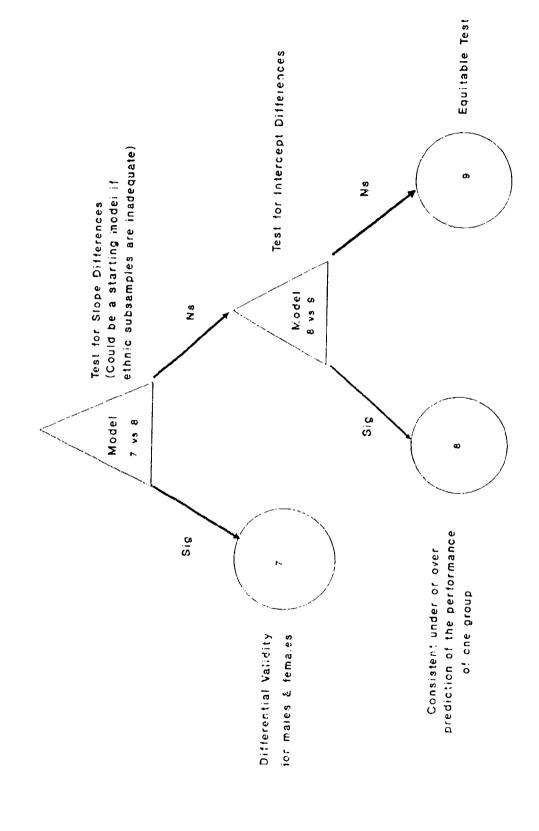
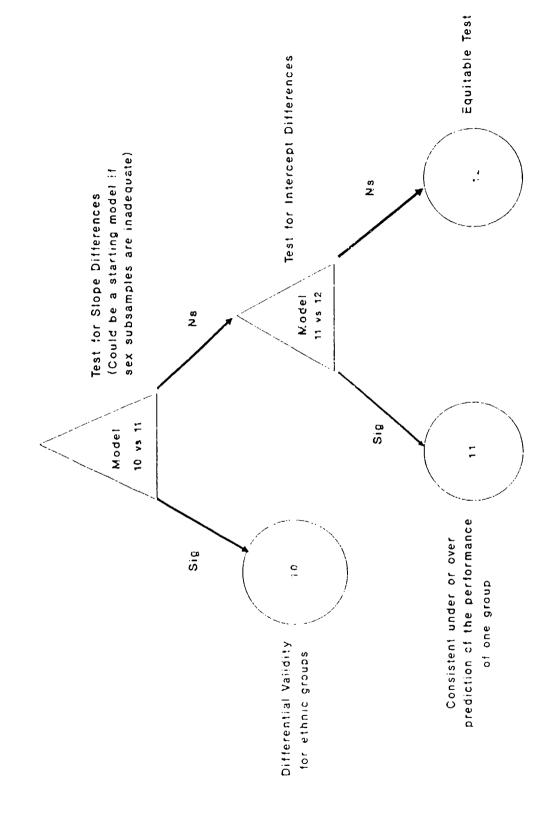


Figure B-3. Hierarchical F-Test Comparisons (Aptitude by Ethnicity)



## APPENDIX C: SUMMARY STATISTICS FOR COMPOSITES

<u>Table C-1.</u> Summary Statistics for Composites (White Males)

	N	⊭ean	Median	Mode	Std Dev	. Variance	Range	Min	Max	Skew	Kurt
Subtest Composite	2825	2.153	2.143	1.654	. 705	.497	3.744	.226	3.970	. 103	699
Academic Ability	2825	92.923	93.000	94.000	16.284	265.157	76.000	52.000	128.000	004	816
AFQT	2825	185.939	185.000	160.000	31.758	1008.597	148.000	109.000	257.000	.048	801
Verbal	2825	137.188	139.000	127.000	26.051	678.630	125.000	66.300	191.000	203	815
Math	2825	96.120	94.000	82.000	16.126	260.044	74.000	60.000	134.000	.409	695
General	2825	59.096	59.378	64.902	8.571	73.463	47.646	32.499	80.145	140	608
Mechanical & Crafts	2825	192.512	193.000	199.600	28.464	810.203	162.000	109.000	271.000	.070	631
Business & Clerical	2825	140.046	140.000	125.000	21.752	473.144	117.000	82.000	199.000	036	502
Electronics	2825	189.910	188.000	188.000	29.537	872.414	153.000	112.000	265.000	. 145	668
Health, Social & Tech	2825	141.457	141.000	138.000	23.537	553.987	121.000	77.000	198.000	.028	788
Perceptual Speed	2825	97.865	99.000	101.000	16.754	280.682	91.000	43.000	134.000	267	212
Technical	2825	144.498	145.000	130.000	22.364	500.169	126.000	79.000	205.000	.038	619

Table C-2. Summary Statistics for Composites (White Females)

	N	Mean	Median	Mode	Std Dev.	Variance	Range	Min	Max	Skew	Kurt
Subtest Composite	2664	2.376	2.360	2.043	.626	.392	3.447	.536	3.983	.058	465
Academic Ability	2664	91.569	91.000	93.000	14.618	213.673	76.000	52.000	128.000	.083	618
AFQT	2664	184.892	184.000	166.000	28.522	813.513	152.000	106.000	258.000	.126	598
Verbal	2664	135.185	136.000	125.000	22.836	521.464	126.000	63.000	189.000	085	622
Math	2664	94.874	93.000	82.000	14.545	211.551	72.000	62.000	134.000	.483	422
General	2664	57.178	57.084	48.973	6.874	47.249	44.326	32.511	76.838	.011	305
Mechanical & Crafts	2664	172.160	170.000	165.000	20.195	407.819	144.000	110.000	254.000	.419	018
Business & Clerical	2664	145.009	145.000	143.000	19.545	382.026	116.000	82.000	198.000	091	275
Electronics	2664	181.496	179.000	170.000	24.273	589.200	145.000	111.000	256.000	.342	333
Health, Social & Tech	2664	134.623	133.000	133.000	19.608	384.471	113.000	81.000	194.000	.209	443
Perceptual Speed	2664	105.253	07.000	113.000	15.625	244.140	85.000	48.000	134.000	505	.114
Technical	2664	125.600	124.000	121.000	14.608	213.381	110.000	80.000	190.000	.429	. 247

<u>Table C-3.</u> Summary Statistics for Composites (Biack Males)

	N .	Meøn	Median	Mode	Std Dev.	Variance	Range	Min	Max —————	Skew	Kurt
Subtest Composite	575	1.716	1.691	1.738	.529	.280	3.310	.487	3.797	.402	.249
Academic Ability	575	76.988	76.000	79.000	12.339	152.242	81.000	46.000	127.000	.643	.363
AFQT	575	155.682	154.000	132.000	23.657	559.677	152.000	102.000	254.000	.677	.434
Verbal	575	108.546	105.000	104.000	20.681	427.705	125.000	63.000	188.000	. <i>7</i> 31	.314
Math	575	84.148	83.000	79.000	11.033	121. <i>7</i> 36	70.000	62.000	132.000	1.049	1.426
General	575	50.368	49.946	34.404	6.323	39.985	46.496	34.404	80.901	.500	.624
Mechanical & Crafts	575	160.666	157.000	146.000	19.590	383.777	154.000	111.000	265.000	.935	1.566
Business & Clerical	575	124.245	124.000	141.000	18.996	360.365	117.000	80.000	197.000	.171	317
Electronics	575	160.555	158.000	148.000	20.783	431.934	147.000	119.000	266.000	.987	1.428
Health, Social & Tech	575	116.536	114.000	112.000	17.054	290.845	110.000	84.000	194.000	. 765	.658
Penceptual Speed	575	95.240	96.000	92.000	20.542	421.988	87.000	46.000	133.000	069	678
Technical	575	119.445	116.000	112.000	15.935	253,913	126.000	73.000	199.000	.849	1.427

<u>Table C-4.</u> Summary Statistics for Composites (Black Females)

	H	Mean	Median	Mode	Std Dev.	Variance	Range	Min	Max	Skew	Kurt
Subtest Composite	684	1.873	1.840	1.068	.489	. 239	2.722	.641	3.363	.329	.011
Academic Ability	684	76.142	75.000	75.000	10.314	106.388	63.000	52.000	115.000	.677	.532
AFQT	684	154.854	152,000	146.000	20.345	413.938	118.000	115.000	233.000	.728	.525
Verbal	684	107. <i>7</i> 50	106.000	95.000	17.862	316.905	98.000	73.000	171.000	.712	.418
Math	684	83.713	82.000	79.000	y.575	91.681	57.000	63.000	120.000	.899	1.310
General	684	50.199	49.931	36.198	4.841	23.431	36.392	36.198	66.589	. 282	. 253
Mechanical & Crafts	684	151.775	151.000	150.000	11.698	136.854	81.000	115.000	196.000	.459	.620
Business & Clerical	684	130.456	130.000	131.000	17.908	320.679	88.000	87.000	175.000	.035	420
Electronics	684	156.598	155.000	145.000	16.070	258.235	100.000	115.000	215.000	.648	-485
Health, Social & Tech	684	113.629	112.000	111.000	12.567	157.926	71.000	86.000	157.000	.619	.472
Perceptual Speed	684	104.737	106.000	131.000	19.528	381.345	91.000	43.000	134.000	355	604
Technical	684	111.203	111.000	112.000	9.182	84.303	67.000	76.000	143.000	.205	.582

<u>Table C-5.</u> Summary Statistics for Composites (Hispanic Males)

	N	Mean	Median	Mode	Std Dev.	Variance	Range	Min	Max	Skew	Kurt
Subtest Composite	330	1.764	1.719	1.164	.529	. 280	2.741	.468	3.209	.233	207
Academic Ability	330	79.070	78.000	84.000	13.099	171.591	68.000	54.000	122.000	.460	004
AFQT	<b>33</b> 0	158.588	158.000	163.000	24.633	606.778	135.000	106.000	241.000	.442	021
Verbal	330	111.206	109.000	102.600	20.915	437.447	109,000	63.000	172.000	.540	.051
Math	330	86.291	84.000	82.000	12.116	146.797	67.000	62.000	129.000	.913	. 703
General	330	51.768	51.437	58.656	6.826	46.588	36.178	37.269	73.448	.183	369
Mechanical & Crafts	3 <b>3</b> 0	167.042	164.000	150.000	23.601	557.019	132.00	121.000	253.000	.619	011
Business & Clerical	330	126.055	125.000	118.000	19.481	379.523	99.000	81.000	180.000	.139	454
Electronics	330	165.179	163.000	158.000	21.973	482.804	133.000	116.000	249.000	.556	. 259
Health, Social & Tech	330	120.721	120.000	120.000	19.037	362.421	104.000	83.000	187.000	.483	133
Perceptual Speed	330	97.073	97.500	85.000	20.256	410.317	88.000	46.000	134.000	183	436
Technical	330	124.121	122.000	114.000	19.063	363.383	102,000	87.000	189.000	.623	008

<u>Table C-6.</u> Summary Statistics for Composites (Hispanic Females)

	Х	Mean	Median	Mode	Std Dev.	Variance	Range	Min	Max	Skew	Kurt
Subtest Composite	684	2.087	2.072	1.521	.558	.311	3.221	.381	3.602	.108	054
Academic /bility	684	82.406	81.000	76.000	13.261	175.864	74.000	52.000	126.000	.335	277
AFQT	684	166.846	164.000	159.000	25.603	655.530	145.000	107.000	252.000	.375	110
Verbal	684	117.858	117.000	104.000	20.869	435.516	114.000	68.000	182.000	.245	410
Math	684	88.273	86.000	82,600	12.149	147.605	76.000	55.000	131.000	.759	.559
General	684	52.682	52.507	45.733	5.599	31.346	35.702	35.188	70.890	.050	. 108
Mechanical & Crafts	684	158.991	158.000	157,000	15.724	247.230	94.00	120.000	214.000	.396	. 363
Business & Clerical	684	135.972	137.000	140.000	18.142	329.131	104.00	79.000	183.000	317	. 104
Electron <sup>i</sup> cs	684	165.294	163.000	158.000	19.536	381.651	110.000	120.000	230.000	.479	.170
Health, Social & Tech	684	121.181	121.000	110.000	17.050	290.702	100.000	80.000	180.000	.390	051
Perceptual Speed	684	104.256	104.000	103.000	17.111	292.785	91.000	43.000	134.000	376	.004
Technical	684	115.871	115.560	114.000	11.385	129.620	76.000	84.000	160.000	.284	.515

## APPENDIX D: F-TESTS OF SIGNIFICANCE FOR COMPOSITES

<u>Table D-1</u>. F-Tests of Significance for Academic Ability Composite

	Co	mparison		R <sup>2</sup>				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	r
English I - IV 1984 - 1	985 Fre	shmen (Ethnici	ity = ₩hi	te, Black & H	ispanic)			
3-way Interaction Test (AS/AB*sex*ethnicity)	1	2	.2420	.2406	.00133	2	2,422	2.13
Sex & Ethnicity Interaction Test	2	3	.2406	.2359	.00470	2	2,424	7.50 **
Consistent Over or Under prediction of Subgroup	2	4	.2406	. 2385	.00215	3	2,424	2.29
English I - IV 1985 - 1	986 Fre	shmen (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2015	. 1998	.00173	2	1,989	2.16
Sex & Ethnicity Interaction Test	2	3	. 1998	.1972	.00265	2	1,991	3.30
Slope Differences for Sex	7	8	.1884	.1882	.00012	1	1,997	0.29
Intercept Differences for Sex	8	9	.1882	.1523	.03595	1	1,998	88.49 **
Slope Differences for Ethnicity	10	11	.1599	.1539	.00601	2	1,995	7.13 **
English I - IV 1984 - 19	85 Soph	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2568	.2566	.00018	2	2,296	0.28
Sex & Ethnicity Interaction Test	2	3	.2566	.2551	.00150	2	2,298	2.31
Slope Differences for Sex	7	8	.2543	. 2485	.00580	1	2,304	17.94 **
Slope Differences for Ethnicity	10	11	. 1963	. 1963	.00004	2	2,302	0.05
intercept Differences for Ethnicity	11	12	.1963	. 1952	.00109	2	2,304	1.56
English I - IV 1985 - 19	186 Soph	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2354	.2344	.00107	2	1,942	1.36
Sex & Ethnicity Interaction Test	2	3	.2343	.2334	.00095	2	1,944	1.21
Slope Differences for Sex	7	8	.2270	.2200	.00699	1	1,950	17.63 **
Slope Differences for Ethnicity	10	11	.1678	.1671	.00069	2	1,948	0.80
Intercept Differences for Ethnicity	11	12	.1671	.1592	.00784	2	1,950	9.17 **
English 1 · 1V 1984 ·	1985 Ju	mior (Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2422	.2421	.00010	2	1,721	0.11
Sex & Ethnicity Interaction lest	2	3	.2421	.2419	.00027	2	1,723	0.31
Slope Differences for Sex	7	8	.2396	.2330	.00661	1	1,729	15.03 **
Slope Differences for Ethnicity	10	11	.1572	.1565	.00067	2	1,727	0.69
Intercept Differences for Ethnicity	11	12	. 1565	.1550	.00148	2	1,729	1.52
English I - IV 1985 ~	1986 Ju	ınior (Ethnici	cy = Whit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2141	.2140	.00008	1	1,258	C.13
Sex & Ethnicity Interaction Test	2	3	.2140	.2140	. 90004	1	1,259	0.07
Slope Differences for Sex	7	8	.2139	.2073	.00656	1	1,262	10.53 *
Intercept Differences for Sex	8	9	.2073	. 1238	.08350	1	1,263	133.03 **
Slope Differences for Ethnicity	10	11	. 1240	.1238	.00021	1	1,262	0.31
Intercept Differences for Ethnicity	11	12	.1238	.1238	.00002	1	1,263	0.03

	Co	mparison	1	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfη	df2	F
English 1 - Iv 1984	- 1985 Se	nior (Ethnici	ty = Whit	c, Black & Hi	spani <b>c)</b>			····
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1981	. 1966	.00149	2	1,275	1.19
Sex & Ethnicity Interaction Test	2	3	. 1966	. 1960	.00065	2	1,277	0.52
Slope Differences for Sex	7	8	.1851	. 1823	.00278	1	1,283	4.37
Intercept Differences for Sex	8	9	.1823	. 1545	.02783	1	1,284	43.71 **
Slope Differences for Ethnicity	10	11	.1616	. 1546	.00700	2	1,281	5.35 *
Intercept Differences for Ethnicity	11	12	.1546	. 1545	.00012	2	1,283	0.09
General Math 1984	1985 Fres	hmen (Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0743	.0728	.00158	2	1,167	0.99
Sex & Ethnicity Interaction Test	2	3	.0728	.0692	.00353	2	1,169	2.23
Slope Differences for Tex	7	δ	.0672	.0655	.00179	1	1,175	2.25
Intercept Differences for Sex	8	9	.0655	.0564	.00902	1	1,176	11.35 **
Scope Differences for Ethnicity	10	11	. 0591	.0590	.00015	2	1,173	0.10
Intercept Differences for Ethnicity	11	12	.0590	.0564	.00253	2	1,175	1.58
General Math 1985 -	1986 Fres	hmen (Ethnici	ty = Whit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 0315	.0315	.00001	1	549	0.00
Sex & Ethnicity Interaction Test	2	3	.0315	.0293	.00220	1	550	1.25
Slope Differences for Sex	7	8	.0218	.0190	.00287	1	553	1.62
Intercept Differences for SLA	8	9	.0190	.0130	.00595	1	554	3.36
Slope Differences for Ethnicity	10	11	.0211	.0137	.00745	1	553	4.21
Intercept Differences for Ethnicity	11	12	.0137	.0130	.00065	1	554	0.37
General Math 1984 -	1985 Sopt	iomore (Ethnic	ity = Whi	te, Black & H	lispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 0674	.0659	.00150	2	736	0.59
Sex & Ethnicity Interaction Test	2	3	. ০65ণ	.0602	.00564	2	738	2.23
Slope Differences for Sex	7	8	.0508	.0508	.00000	1	744	0.00
Intercept Differences for Sex	8	9	.0508	.0474	.00342	1	745	2.69
Slope Differences for Ethnicity	10	11	.0571	.0552	.00185	,	742	0.73
Intercept Differences for Ethnicity	11	12	.0552	.0474	.00786	2	744	3.10
General Math 1985 -	1986 Sopt	nomore (Ethnic	:)ty = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1075	.1014	.00608	1	305	2.08
Sex & Ethnicity Interaction Test	2	3	.1014	.0992	.00227	1	300	0.77
Slope Differences for Sex	7	8	.0823	.0817	.00063	1	309	0.21
Intercept Differences for Sex	8	9	.0817	.0463	.03540	1	310	11.95 **
Slope Differences for Ethnicity	10	11	.0621	.0601	.00201	1	309	0.66
Intercept Differences for Ethnicity	11	12	.0601	.0463	. 01381	1	310	4.56
General Math 1984	- 1985 Ju	nior (Ethnicii	ty = White	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 0546	.0541	.00043	1	266	0.12
Sex & Ethnicity Interaction Test	5	3	.0541	. 0541	. 00roù3	1	267	0.01
Slope Differences for Sex	7	8	.0498	.0481	.00167	1	270	0.47
Intercept Differences for Sex	ò	9	.0481	.0224	.02568	1	271	7 31 *
Slope Differences for Ethnicity	10	11	.0258	.0258	.00001	1	270	0.00
Intercept Differences for Ethnicity	11	12	.0258	.0224	.00337	1	271	0.94

<u>Table D-1</u>. (Continued)

	C	omparison		R <sup>2</sup>				
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Math 1985 - 1986	Junior	(Ethnicity not	tested)		<del></del>			
Slope Differences for Sex	7	8	.1175	.1161	.00143	1	222	0.36
Intercept Differences for Sex	8	9	.1161	.0885	.02763	1	223	6.97 *
General Math 1985 - 1986	Junior	(Ethnicity = W	hite & Bl	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1114	. 1078	.00362	1	195	0.79
Intercept Differences for Ethnicity	11	12	. 1078	.1056	.00217	1	196	0.48
General Math 1984 - 1985	Senior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.0922	.0842	.00800	•	230	2.03
Intercept Differences for Sex	8	9	.0842	.0819	.00029	1	231	0.07
General Math 1984 - 198	S Sento	^ (Ethnicity = )	White & 5	(ack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.1244	. 1235	.00094	1	203	0.22
Intercept Differences for Ethnicity	11	12	.1225	.1054	.01811	1	204	4.22
Algebra 1984 - 1985	Freshin	en (Ethnicity	≠ White â	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1839	. 1764	.00733	1	1,180	10.59 *
Sex & Ethnicity Interaction Test	2	3	.1764	, 1764	.00001	1	1,181	0.01
Slope Differences for Sex	7	8	.1745	.1733	.00123	1	1,184	1.76
Intercept Differences for Sev	ε	9	.1733	. 1331	.04025	1	1,185	57.70 **
Slope Differences for Ethnicity	10	11	.1385	. 1358	.00273	1	1,184	3.75
Intercept Differences for Ethnicity	11	12	.1358	.1331	.00274	1	1,185	3.76
Algebra 1935 - 1986	Freshm	en (Etanicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*elanicity)	1	2	.1895	. 1895	.00000	1	708	0.00
Sex & Ethnicity Interaction Test	2	3	.1895	. 1878	.00171	1	709	1.50
Slope Differences for Sex	7	8	.1843	. 1843	.00000	1	712	0.00
Intercept Differences for Sex	8	9	.1843	. 1425	.04185	1	713	36.58 **
Slope Differences for Ethnicity	10	11	.1459	. 1453	.00052	1	712	0.44
Intercept Differences for Ethnicity	11	12	. 1453	. 1425	.00286	1	713	2.39
Algebra 1984 - 1985	Sophor	ore (Ethnicity	= White	& wormahite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1271	, 1271	.00000	1	871	0.00
Sex & Ethnicity Interaction Test	2	3	.1271	.1214	.00566	1	872	5.66
Stope Differences for Sex	7	8	.1189	.1163	.00265	1	875	2.64
Intercept Differences for Sex	8	9	.1163	.0901	.02620	1	876	25.97 **
Slope Differences for Ethnicity	10	11	.0720	.0905	.00155	1	875	1.49
Intercept Differences for Ethnicity	11	12	.0905	.0901	.00041	1	376	0.39
Algebra 1985 - 1986	5 Sophor	ωre (Ethnicity	·= White	& Nonwhite)				
3-way Interaction Test (ASVAB*ser*ethnicity)	1	?	.1237	. 1236	.00005	1	617	0.03
Sex & Ethnicity Interaction Test	2	3	.1236	.1218	.00185	1	618	1.31
Slope Differences for Sex	7	8	.1156	.1150	.00062	1	621	0.44
Intercept Differences for Sex	8	9	.1150	.0975	.01755	1	622	12.33 **
Slope Differences for Ethnicity	10	11	.1017	.1002	.00153	1	621	1.06
Intercept Differences for Cibnicity	11	12	.1002	.0975	.00275	1	622	1.90

Table D-1 (Continued)

		Co	mparisen		R <sup>2</sup>				
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfı	df2	F
	Alsebra 1984 - 198	5 Junio	r (Ethnicity	= White &	Black)				
3-way Interaction Test	•	1	2	.1749	. 1743	.00058	1	489	0.35
Sex & Ethnicity Intera	ction Test	2	3	.1743	.1730	.00129	1	400	0.77
Slope Differences for	Sex	7	8	.1642	. 1639	.00033	1	493	0.19
Invercept Differences	for Sex	8	9	.1639	.1341	.02974	1	494	17.57 **
Slope Differences for	Ethnicity	10	11	.1425	. 1389	.00359	1	493	2.06
Intercept Differences	for Ethnicity	11	12	.1389	. 1341	.00479	1	494	2.75
	Algebra 1985 - 1986 Juni	or (Et	hnicity not te	sted)					
Slope Differences for	Sex	7	8	. 1283	.1207	.00761	1	273	2.38
Intercept Differences	for Sex	8	9	. 1207	. 1131	.00757	1	274	2.36
	Algebra 1985 - 1986 Jun	nior (Et	hnicity = Whit	e & Nonwh	ite) (Sex not	tested)			
Stope Differences for	Ethnicity	10	11	.1297	.1172	.01248	1	273	3.91
Intercept Differences	for Ethnicity	11	12	.1172	.1131	.00411	1	274	1.27
	Algebra 1984 - 1935 Seni	or (Et	hnicity not te	sted)					
Slope Differences for	Sex	7	8	.1440	. 1349	.00913	1	265	2.83
Intercept Differences	for Sex	8	9	. 1349	. 0960	.03883	1	266	11.94 **
	Algebra 1984 - 1985 Ser	nior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for	Ethnicity	10	:1	.1207	. 1038	.91687	1	265	5.08
Intercept Differences	for Ethnicity	11	12	. 1038	.0960	.00777	1	266	2.31
	Geometry 1985 - 1986 Fres	shmen (	Ethnicity not	testod)					
Slope Differences for	Sex	7	8	. 2301	. 2300	.00007	1	511	0.05
Intercept Differences	for Sex	8	9	. 2300	.2241	.00590	1	512	3.92
Ge	ometry 1985 - 1986 Freshme	en (Ethr	nicity = White,	Black &	Hispanic) (Se	x not test	ed)		
Slope Differences for	Ethnicity	10	11	. 2269	. 2245	.00238	2	5.9	0.78
Intercept Differences	for Ethnicity	11	12	. 2245	.2241	.00041	2	511	0.14
	Geometry 1984 - 1985 Sopho	omore (	Ethnicity not	tested)					
Slope Differences for	Sex	7	8	. 2233	.2232	.00006	1	561	0.04
Intercept Differences	for Sex	8	9	. 2233	.2141	.00910	1	562	6.58
Go	ometry 1984 - 1985 Sophork	ore (Et	.hnicity = Whit	e, Black	& Hispanic) (	Sex not te	sted)		
Slope Differences for		10	11	.2274	.2178	.00956	2	559	3.46
Intercept Differences	for Ethnicity	11	12	. 2178	.2142	. 00365	2	561	1.31
	Geometry 1985 - 1986 Sophi	ounoue (	Ethnicity not	tested)					
Slope Differences for		7	8	. 2397	. 2393	.00034	1	410	0.18
Intercept Differences	for Sex	8	9	.2393	.2149	.02444	1	411	13.20 **

Table D-1. (Continued)

	Col	mparison	F	2			<u> </u>	
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Geometry 1985 - 1986 Sc	phomore	(Ethnicity = )	√hite & Bl	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.2546	.2338	.02086	1	371	10.39 *
Geometry 1984 - 1985 Jun	nior (E	thnicity not to	ested)					
Slope Differences for Sex	7	8	.2086	.2052	.00335	1	305	1.29
Intercept Differences for Sex	8	9	.2052	.1838	.02143	1	306	8.25 *
Geometry 1984 - 1985 Ju	ınior (E	thnicity = Whi	te & Norwi	nite) (Sex no	tested)			
Slope Differences for Ethnicity	10	11	.1866	. 1860	.00051	1	305	0.19
Intercept D rences for Ethnicity	11	12	. 1860	.1838	.00227	1	306	0.86
Geometry 1985 - 1986 Jur	nior (E	thnicity not to	ested)					
Slope Differences for Sex	7	8	.1800	.1778	.00214	1	123	0.32
Intercept Differences for Sex	8	9	. 1778	.1646	.01328	1	124	2.00
Geometry 1985 - 1986 Ju	unior (E	thnicity = Whi	te & Nonwi	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.2891	. 2290	.06014	1	123	10.41 *
Geometry 1984 - 1985 Ser	nior (E	thnicity not t	ested)					
Slope Differences for Sex	7	8	.2335	.2299	.00358	1	107	0.50
Intercept Differences for Sex	8	9	.2299	. 2290	.00091	1	108	0.13
Geometry 1984 - 1985 S	enior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.2481	.2426	.00552	1	107	0.79
Intercept Differences for Ethnicity	11	12	. 2426	.2290	.01361	1	108	1.94
Calculus 1985 - 1986 Jui	nier (E	thnicity not t	ested)					
Slope Differences for Sex	7	8	.0826	.0808	.00184	1	147	0.29
Intercept Differences for Sex	8	9	.0808	.0804	.00035	1	148	0.06
General Science 1984 -	1985 Fre	eshmen (Ethnic	ity = ₩hi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2474	.2436	.00386	2	1,956	5.01 *
Sex & Ethnicity Interaction Test	2	3	.2436	.2356	.00800	2	1,958	10.35
Consistent Over or Under prediction of Subgroup	2	4	. 2436	.2431	.00047	3	1,958	0.41
General Science 1985 - 1986	Freshm	en (Ethnicity	not teste	d)				
Stope Differences for Sex	7	8	.1251	.1203	.00477	1	274	1.49
Intercept Differences for Sex	8	9	.1204	.1128	.00751	1	275	2.35
General Science 1985 - 19	86 Frest	nmen (Ethnicity	/ = White	å Black) (Sc)	not teste	(a)		
Slope Differences for Ethnicity	10	11	. 1350	.1128	.02220	1	240	6.16
Intercept Differences for Ethnicity	11	12	.1128	.1124	.00038	1	241	6.10

<u>Table D-1</u>. (Continued)

	Co	mparison	(	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df!	df2	F
General Science 1984 -	1985 Sop	homore (Ethni	city = Wh	ite & Nonwhite	e)			
3-way Interaction Test (ASVAB*sex*e`hnicity)	1	2	.2268	.2253	.00152	1	341	0.67
Sex & Ethnicity Interaction Test	2	3	.2253	.2150	.01029	1	342	4.54
Slope Differences for Sex	7	8	.2005	. 2001	.00030	1	345	0.13
Intercept Differences for Sex	8	9	.2002	. 1606	.03957	1	346	17.12 *
Slope Differences for Ethnicity	10	11	.1817	.1786	.00316	1	345	1.33
Intercept Differences for Ethnicity	11	12	.1786	.1606	.01799	1	346	7.58 *
General Science 1985 - 1986	Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.1329	.1324	.00051	1	183	0.11
Intercept Differences for Sex	R	Q	.1324	.1017	.03068	1	184	6.51
General Science 1985 - 198	16 Sophor	ore (Ethnicity	= White	& Black) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	.1711	. 1618	.00925	1	158	1.76
Intercept Differences for Ethnicity	11	12	.1618	. 1314	.03037	1	159	5.76
General Science 1984 - 1985	Junior	(Ethnicity no	t tested)					
Stope Differences for Sex	7	8	.0310	.0802	.00074	1	174	0.14
Intercept Differences for Sex	ខ	9	.0862	. 0627	.01750	1	175	3.33
General Science 1984 - 1	1985 Juni	or (Ethnicity	= White &	Black) (Sex	not testea.	)		
Scope Differences for Ethnicity	10	11	, 1398	. 1389	.00088	1	149	0.15
Intercept Differences for Ethnicity	11	12	. 1390	.0838	.05520	1	150	9.62 *
General Science 1985 - 1986	Junier	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 2359	. 2355	.00046	1	258	C.15
Intercept Differences for Sex	8	9	. 2355	.2176	.01790	1	259	6.06
General Science 1985 - 198	36 Junior	(Ethnicity =	White & N	onwhite) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	. 2208	. 2176	.00317	1	258	1.05
Intercept Differences for Ethnicity	ן ז	12	.2176	.2176	.00005	1	259	0.02
General Science 1984 - 198	5 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 0888	.0887	.00010	ļ	182	0.02
Intercept Differences for Sex	8	9	.0887	.0704	.01825	1	183	3.66
Biology I - II 1984 - 1985	Freshmer	n (Ethnicity r	not tested	<b>!</b> )				
Stope Differences for Sex	7	8	. 2227	.2227	.00001	1	2 <b>99</b>	0.00
Intercept Differences for Sex	8	9	.2227	.2083	.01445	1	300	5.58
Biology I - II 1984 - 198	5 freshoo	en (Ethnicity =	White &	Nonwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2197	_2083	.06238	1	299	0.90
Intercept Differences for Ethnicity	11	12	. 2983	. 2082	.00005	1	<b>3</b> 00	0.02

<u>Table D-1</u>. (Continued)

	Co	mparison		82				
F-Test Comperison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Biology I - 11 1985 -	1986 Fre	shmer (Ethnic	ity = Whi	te & Black)		·		
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1884	. 1884	.00000	1	1,119	0.00
Sex & Ethnicity Interaction Test	2	3	.1884	. 1884	.00002	1	1,120	0.03
Slope Differences for Sex	7	8	.1866	. 1857	.00095	1	1,123	1.31
Intercept Difference: for Sex	8	9	.1857	. 1552	.33052	1	1,124	42.12 **
Slope Differences for Ethnicity	10	11	.1570	. 1568	.00013	1	1,123	0.18
Intercept Differences for Ethnicity	11	12	.1568	. 1552	.00165	1	1,124	2.20
Biology I - 11 1984 - 1	1985 Soph	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3:way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2410	.2404	.00060	2	1,371	0.54
Sex & Ethnicity Interaction Test	2	3	.2404	.2337	.00671	2	1,373	6.06 *
Slope Differences for Sex	7	8	. 2063	.2038	.00254	1	1,379	4.41
Intercept Differences for Sex	8	9	.2038	. 1852	.01861	1	1,380	32.25 **
Slope Differences for Ethnicity	19	11	.2095	.2053	.00411	2	1,377	3.58
Intercept Differences for Ethnicity	11	12	.2053	. 1852	.02018	2	1,379	17.51 **
Biology I - II 1985 - 1986	Sophonion	e (Ethnicity:	not teste	d)				
Slope Differences for Sex	7	8	.2250	.2181	.00693	1	335	2.99
Intercept differences for Scx	8	9	.2181	. 1652	.05287	1	336	22.72 **
Aiology I - 11 1985 - 1986 Sop	ohomore (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not t	ested.	<b>&gt;</b>	
Slope Differences for Ethnicity	10	11	.1708	. 1673	0.0349	2	333	0.70
Intercept Differences for Ethnicity	11	12	. 1673	. 1652	.00204	2	335	0.41
Biology I - 11 1984	- 1985 Ju	nior (Ethnici	ty = Whit	e & Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2349	. 2339	.00096	1	397	0.50
Sex & Ethnicity Interaction Test	2	3	. 2339	.2339	.00000	1	398	0.00
Slope Differences for Sex	7	8	. 2234	.2147	.00872	1	401	4.50
Intercept Differences for Sex	.9	9	.2147	. 1825	.03222	1	402	16.49 **
Slope Differences for Ethnicity	10	11	. 1954	. 1922	.00423	1	401	2.11
Intercept Differences for Ethnicity	<b>1</b> 1	12	. 1922	. 1825	.00972	1	402	4.84
Biology I - II 1985 - 198	5 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.3155	.3010	.01441	1	147	3.09
Intercept Differences for Sex	8	9	. <b>3</b> 010	. 2592	.04188	1	148	8.87 *
<b>B</b> iology I - [1 1984 - 198	5 Senior	(Ethnicity no	t tested)					
Slepe Differences for Sex	7	8	.3459	. 3433	.00257	1	195	0.77
Intercept Differences for Sex	8	9	.3432	.3113	.03199	1	196	9.55 *
8:ology I - !I 1984 - 1°	985 Senia	or (Ethnicity =	White &	Black) (Sex n	et tested)			
slupe differences for Ethnicity	:0	11	. 3697	.3689	.00084	1	176	ŭ.23
Intercept Differences for Ethnicity								

Table 0-1. (Continued)

		Com	parison		<sub>R</sub> 2				
F-Yest Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfi	ď2	F
Che	mistry I - II 1985 - 19	86 Freshmen	(Ethnicity r	not tested	d)				
Slope Differences for	Sex	7	8	.2096	.2022	.00741	1	128	1.20
Intercept Differences	for Sex	8	9	.2022	.1781	.02414	1	129	3.90
Chen	nistry I · 11 1984 - 198	35 Sophomore	(Ethnicity r	not tester	ಕ)				
Slope Differences for	Séx	7	8	.0924	.0837	.00874	1	168	1.62
Intercept Differences	for Sex	8	9	.0837	.0559	.02776	1	169	5.12
Chen	nistry I - II 1985 - 198	36 Sophomore	(Ethnicity r	not tester	<b>d)</b>				
Slope Dilferences for	Sex	7	8	.1342	. 1295	.00473	1	430	2.35
Intercept Differences	for Sex	8	9	.1295	.0815	.04797	1	431	23.75 **
CH	nemistry I - 11 1984 - 1	1985 Junior	(Ethnicity no	i tested	)				
Slope Differences for	Sex	7	8	.1911	. 1894	.00171	1	426	0.90
Intercept Differences	for Sex	8	9	. 1894	.1419	.04741	1	427	24.97 *
(	Chemistry 1 - 11 1984 -	1985 Junior	(Ethnicity =	Write & !	Nonwhite) (Se	x noi testa	ed)		
Slope Differences for	Ethnicity	10	11	.1653	.1607	.00459	1	426	2.34
Intercept Differences	for Ethnicity	11	12	.1607	.1419	.01873	1	427	9.53 *
CH	nemistry 1 - 11 1985 - 1	1986 Junior	(Ethnicity no	ot test <b>e</b> d	)				
Slope Differences for	Sex	7	8	. 1535	. 1469	.00651	1	137	1.05
Intercept Differences	for Sex	8	9	.1470	.0874	. 05959	1	138	9.64 *
(	Chemistry 1 - II 1985 -	1986 Junior	(Ethnicity =	White &	Nonwhite) (Se	x not teste	ed)		
Slope Differences for	Ethnicity	10	11	.0999	.0998	.00011	1	137	0.02
Intercept Differences	for Ethnicity	11	12	.0998	.0874	.01246	1	138	1.91
Ci	nemistry I - II 1984 - 1	1985 Senior	(Ethnicity no	ot tested	)				
Slope Differences for	Sex	7	8	.2180	.2148	.00312	1	156	0.62
Intercept Differences	for Sex	8	9	.2148	.2143	.00053	1	157	0.11
	Chemistry 1 - 11 1984 -	1985 <b>\$</b> enior	(Ethnicity =	White &	Nonwhite) (Se	x not teste	:d)		
Slope Differences for	Ethnicity	10	11	.2584	.2207	.03770	1	156	7.93 *
1	Physics 1 - 11 1985 - 19	986 Junior	(Ethnicity no	t tested)					
Slope Differences for	Sex	7	8	.1322	. 1216	.01058	1	232	2.83
Intercept Differences	for Sex	8	9	.1216	.0838	.03783	1	233	10.03 *
i	Physics I • II 1984 • 19	985 Senior	(Ethnicity no	t tested)					
Slope Differences for	Sex	7	õ	.1997	.1996	.00007	1	<b>16</b> 6	0.01
Intercept Differences	, ,	3	9	. 1996	.1576	.04199	1	167	8.76 *

	Соп	nparison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Government & Civics 1984 - 19	85 Freshn	nen (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2830	. 2814	.00167	1	344	0.80
Intercept Differences for Sex	8	9	.2814	.2726	.00877	1	345	4.21
Government & Civics 1984 - 198	5 Sophomo	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	. 1468	. 1372	.00962	1	155	1.75
Intercept Differences for Sex	8	9	. 1372	.1072	.03000	1	156	5.42
Government & Civics 1985 - 198	6 Sophomo	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.1478	- 1414	.00636	1	417	3.11
Intercept Differences for Sex	8	9	.1414	.1116	.02979	1	418	14.50 **
Government & Civics 1985 - 19	86 Sophor	more (Ethnicit	y = White	& Hispanic)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	. 1390	. 1384	.00057	1	388	0.26
Intercept Differences for Ethnicity	11	12	. 1384	. 1194	.01901	1	389	8.58 *
Government & Civics 1984 - 19	85 Junio	r (Ethnicity	not teste	·d)				
Slope Differences for Sex	7	8	.2400	. 2373	.00275	1	456	1.65
Intercept Differences for Sex	8	9	.2373	.2168	.07044	1	457	12.25 **
Government & Civics 1984 - 1	985 Junio	or (Ethnicity	≃ Wnite &	Nonwhite) (S	ex not tes	ted)		
Slope Differences for Ethnicity	10	11	.2219	.2211	.00084	1	456	0.49
intercept Differences for Ethnicity	11	12	.2211	.2168	.00422	1	457	2.48
Government & Civics 198	15 - 1986	Junior (Ethn	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2713	. 2699	.00140	1	707	1.36
Sex & Ethnicity Interaction Test	2	3	.2699	. 2695	.00040	1	708	0.39
Slope Differences for Sex	7	8	.2630	.2580	.00507	1	711	4.90
Intercept Differences for Sex	8	9	.2580	.2282	.02975	1	212	28.55 **
Slope Differences for Ethnicity	10	11	.2348	. 2347	.00010	1	711	0.10
Intercept Differences for Ethnicity	11	12	.2347	.2282	.00647	1	712	6.02
Government & Civics 198	34 - 1985	Senior (Ethr	nicity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2629	. 2623	.00062	1	602	0.51
Sex & Ethnicity Interaction Test	2	3	. 2623	.2622	.00007	1	603	0.06
Slope Differences for Scx	7	8	.2505	.2501	.00041	1	606	0.33
Intercept Differences for Sex	8	9	.2501	.2395	.01056	1	607	8.54 *
Slope Differences for Ethnicity	10	11	.2526	. 2513	.00138	1	606	1.12
Intercept Differences for Ethnicity	11	12	.2512	. 2395	.01172	1	607	9.50 →
History 1984 - 1989	5 Freshme	n (Ethnicity	= White,	Black & Hispa	nnic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2812	.2806	.00057	2	1,319	0.52
Sex & Ethnicity Interaction Test	2	3	. 2806	. 2783	.00235	5	1,321	2.16
Slope Differences for Sex	7	8	. 2741	.2740	.00010	1	1,327	0.18
Intercept Differences for Sex	8	9	.2740	. 2404	.03359	1	1,328	61.45 *
Slope Differences for Ethnicity	10	11	.2480	. 2430	.00493	2	1,325	4.34
Intercept Differences for Ethnicity	11	12	. 2430	.2404	.00261	2	1,327	2.29

<u>Table D-1</u>. (Continued)

	Com	parison		R <sup>2</sup>				
F-lest Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
History 1985 - 1986	Freshmen	(Ethnicity	White &	Black)	- <del></del>			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	?	. 2684	. 2684	.00000	1	1,343	0.00
Sex & Ethnicity Interaction Test	2	3	.2684	.2681	.00029	1	1,344	0.52
Slope Differences for Sex	7	8	.2570	.2670	.00006	í	1,347	0.10
Intercept Differences for Sex	8	9	.2670	.2571	.00990	1	1,348	18.21 **
Slope Differences for Ethnicity	10	11	.2582	.2571	.00106	1	1,347	1.92
Intercept Differences for Ethnicity	11	12	.2571	.2571	.00005	1	1,348	80.0
History 1984 - 1985	\$ophomor	e (Ethnicity	/ = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2641	. 2636	.00050	1	1,430	0.98
Sex & Ethnicity Interaction Test	2	3	.2636	.2618	.00180	1	1,431	3.50
Slope Differences for Sex	7	3	.2606	- 2606	.00000	1	1,434	0.01
Intercept Differences for Sex	8	9	.2606	.2408	.01977	1	1,435	38.37 **
Slope Differences for Ethnicity	10	11	.2422	.2421	۵۵۵۵۵.	1	1,434	0.12
Intercept Differences for Ethnicity	11	12	.2421	.2408	.00130	1	1,435	2.47
History 1985 - 1986	Sophomor	e (Ethnicity	/ = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2144	-2138	.00063	2	1,465	0.58
Sex & Ethnicity Interaction Test	2	3	.2138	.2081	.00569	2	1,467	5.31 *
Slope Differences for Sex	7	8	.1944	.1931	.00127	1	1,473	2.32
Intercept Differences for Sex	8	9	. 1931	.1535	. 03963	1	1,474	72.39 **
Slope Differences for Ethnicity	10	11	.1707	.1616	.00908	2	1,471	8.05 **
History 1984 - 19	85 Junior	(Ethnicity	/ = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2946	.2944	.00024	1	1,102	0.37
Sex & Ethnicity Interaction Test	2	3	.2944	.2936	.00079	1	1,103	1.24
Slope Differences for Sex	7	8	.2918	.2914	.00046	1	1,106	0.72
Intercept Differences for Sex	8	9	.2914	.2583	.03308	1	1,107	51.67 **
Slope Differences for Ethnicity	10	11	.2601	.2601	.00007	1	1,106	0.10
Intercept Differences for Ethnicity	11	12	.2601	. 2583	.00179	1	1,107	2.68
History 1985 - 1986 Jur	nior (Eth	nicity riot to	ested)					
Slope Differences for Sex	7	8	.2295	.2198	.00976	1	428	5.42
Intercept Differences for Sex	8	9	.2198	. 1801	. 03965	1	429	21.80 **
History 1985 - 1986	Junior (E	thnicity = W	nite & Bla	ck) (Sex not	test <b>ed</b> )			
Slope Differences for Ethnicity	10	11	.1786	. 1780	.00062	1	409	0.31
Intercept Differences for Ethnicity	11	12	.1780	. 1747	.00328	1	410	1.64
Nistory 1984 - 1985 Ser	nior (Eth	inicity not t	ested)					
Slope Differences for Sex	7	8	.3191	. 3152	.00389	1	423	2.42
Intercept Differences for Sex	8	9	<b>.3</b> 152	. 3074	.00786	i	424	4.87
History 1984 - 1985	Senior (E	thnicity = W	hite & Bla	ick) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.3573	.3549	.00247	1	402	1.54
Intercept Differences for Ethnicity	11	12	.3549	.3288	.02604	1	403	16.27 **

Table D-1. (Continued)

	Co	mparison	1	₹2				
f-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dí 1	df2	F
Foreign Language 1984 -	1985 Freshme	n (Ethnicity I	not tester					
Slope Differences for Sex	7	8	.2528	. 2528	.00001	1	1,012	υ. <b>01</b>
Intercept Differences for Sex	8	9	.2528	. 1957	.05705	1	1,013	77.34
Foreign Language 1984 - 1989	5 Freshmen (	Ethnicity = Wh	ite, Blaci	k & Hispanic)	(Sex not t	ested	)	
Slope Differences for Ethnicity	10	11	.2197	.2163	.00341	2	1,010	2.21
Intercept Differences for Ethnicity	11	12	.2163	. 1957	.02060	2	1,012	13.30
Foreign Language 1985 -	1986 Freshme	n (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	. 1931	. 1907	.00249	1	797	2.46
ntercept Differences for Sex	8	9	. 1907	-1413	.04936	1	798	48.67
Foreign Language 1985 - 198	6 Freshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not t	ested	)	
Slope Differences for Ethnicity	10	11	.1576	.1501	.00747	2	795	3.53
Intercept Differences for Ethnicity	11	12	. 1501	. 1413	.09884	2	797	4.15
Foreign Language 1984 - 1	985 Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2087	.2083	.00046	1	892	0.52
Intercept Differences for Sex	8	9	.2083	. 1229	.08539	1	893	96.31
Foreign Language 1984 - 198	5 Sophomore	(Ethnicity = W	hite, Bla	ck & Hispanic	) (Sex not	teste	d)	
Slope Differences for Ethnicity	10	11	.1398	.1349	.00490	2	890	2.53
Intercept Differences for Ethnicity	11	12	. 1349	. 1229	.01201	2	892	6.19
Foreign Language 19	85 · 1986 So	phomore (Ethn	icity = W	hite & Nonwhi	te)			
3-way Interaction Test (ASVAB*sex*ethnicity	) 1	2	.1612	.1598	.00143	1	604	1.03
Sex & Ethnicity Interaction Test	2	3	.1598	.1595	.00022	1	605	0.16
Slope Differences for Sex	7	8	. 1453	. 1436	.00165	1	608	1.17
Intercept Differences for Sex	8	9	. 1436	.0832	.06044	1	609	42.98
Slope Differences for Ethnicity	10	11	.0985	.0970	.00155	1	608	1.05
Intercept Differences for Ethnicity	11	12	.0970	.0832	.01383	1	609	9.33
Foreign Language 1984 -	1985 Junior	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.2171	. 2124	.00463	1	480	2.84
Intercept Differences for Sex	8	9	.2124	.1347	.07775	1	481	47.48
Foreign Language 1984 - 19	85 Junior (E	thnicity = ₩hi	te, Black	& Hispanic)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	. 1566	.1546	.00197	2	478	0.56
Intercept Differences for Ethnicity	11	12	.1546	.1347	.01993	2	480	5.66
Foreign Language 1985 -	1986 Junior	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.1894	.1742	.01513	1	247	4.61
					_		-	

<u>Table D-1</u>. (Continued)

		Con	parison		R <sup>2</sup>				
Stope Differences for Ethnicity	F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Fareign Language 1984 - 1985   Senior   (Et.nicity not tested)	Foreign Language 1985 - 19	86 Junior	(Ethnicity =	White &	Hispanic) (Se	x not teste	2d)		
Foreign Language 1984 - 1985 Senior (Et.nicity not tested)  Slope Bifferences for Sex 7 8 .1634 .1620 .00138 1 224 0.  Intercept Differences for Sex 8 9 .1620 .1450 .01705 1 225 4.  Fareign Language 1984 - 1985 Senior (Ethnicity = White & Hispanic) (Sex not tested)  Slope Bifferences for Ethnicity 10 11 .0907 .0872 .00340 1 185 0.  Intercept Differences for Ethnicity 11 12 .0873 .0829 .00441 1 186 0.  Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 12 .0114 .00050 1 215 0.  Intercept Differences for Ethnicity 11 12 .0114 .00050 1 215 0.  Secretary & Office Education 1984 - 1985 Senior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0119 .1014 .00050 1 220 1.  Intercept Differences for Ethnicity 10 11 .0119 .1014 .00060 1 220 1.  Intercept Differences for Ethnicity 10 11 .0119 .1014 .00060 1 220 1.  Intercept Differences for Ethnicity 10 11 .0119 .1014 .00060 1 220 1.  Intercept Differences for Ethnicity 10 11 .0119 .1014 .00060 1 220 1.  Intercept Differences for Ethnicity 10 11 .0119 .1014 .00060 1 220 1.  Intercept Differences for Ethnicity 10 11 .0119 .1014 .00060 1 220 1.  Intercept Differences for Ethnicity 10 11 .2 .1141 .0000 1 220 1.  Intercept Differences for Sex 7 8 .2246 .2446 .00000 1 507 0.  Intercept Differences for Sex 8 y .2246 .245 .01013 1 508 6.  Iyping & Word Processing 1984 - 1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2167 .2154 .00129 2 505 0.  Intercept Differences for Ethnicity 11 12 .2154 .2155 .00003 2 507 0.  Intercept Differences for Ethnicity 11 12 .1324 .00177 1 445 0.  Iyping & Word Processing 1985 - 1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Iyping & Word Processing 1985 - 1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 11 12 .1324 .1324 .00177 1 445 0.  Interce	Slope Differences for Ethnicity	10	11	.0986	.0820	. 01656	1	205	3.77
Stope Differences for Sex	Intercept Differences for Ethnicity	11	12	.0820	.0801	.00188	1	206	0.42
Foreign Language 1984 - 1985 Senior (Ethnicity = White & Hispanic) (Sex not tested)  Stope Differences for Ethnicity 10 11 .0907 .0873 .00340 1 185 0. Intercept Differences for Ethnicity 11 12 .0873 .0829 .00441 1 186 0.  Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1019 .1014 .00050 1 215 0. Intercept Differences for Ethnicity 11 12 .1014 .10080 1 215 0. Intercept Differences for Ethnicity 11 12 .1014 .10080 1 216 0.  Secretary & Office Education 1984 - 1985 Senior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1190 .1144 .00490 1 220 1. Intercept Differences for Ethnicity 11 12 .1141 .1082 .00589 1 221 1.  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .2246 .2246 .00000 1 507 0. Intercept Differences for Ethnicity 10 11 .2167 .2154 .00129 2 505 0.  Intercept Differences for Ethnicity 11 12 .2154 .2154 .00129 2 505 0.  Intercept Differences for Ethnicity 11 12 .2154 .2165 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Ethnicity 11 12 .2154 .2165 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Ethnicity 11 12 .2154 .2165 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Ethnicity 11 12 .2154 .2145 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Intercept Differences for Ethnicity 11 12 .1324 .1324 .00177 1 445 0.  Typing & Word Processing 1984 - 1985 Sophowore (Ethnicity not tested)  Slope Differences for Ethnicity 11 12 .1324 .1324 .00177 1 445 0.  Typing & Word Processing 1984 - 1985 Sophowore (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1540 .1539 .00464 1 632 33.	Foreign Language 1984 - 198	5 Senior	(Et. nicity no	ot tested	)				
Foreign Language 1984 - 1985   Senior (Ethnicity = White & Hispanic) (Sex not tested)	Slope Differences for Sex	7	8	. 1634	.1620	.00138	1	224	0.37
Stope Differences for Ethnicity	Intercept Differences for Sex	8	9	.1620	.1450	.01705	1	225	4.58
Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)	Foreign Language 1984 - 19	85 Senior	(Ethnicity =	White &	Hispanic) (Se	x not teste	ed)		
Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)	Slope Differences for Ethnicity	10	11	.0907	.0873	.00340	1	185	0.69
Stope Differences for Ethnicity	Intercept Differences for Ethnicity	11	12	.0873	.0829	.00441	1	186	0.90
Intercept Differences for Ethnicity 11 12 .1014 .1008 .00063 1 216 0.  Secretary & Office Education 1984 - 1985 Senior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1190 .1141 .00490 1 220 1.  Intercept Differences for Ethnicity 11 12 .1141 .1082 .00589 1 221 1.  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .2246 .2246 .00000 1 507 0.  Intercept Differences for Sex 8 y .2246 .2145 .01013 1 508 6.  Typing & Word Processing 1984-1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2167 .2154 .00129 2 505 0.  Intercept Differences for Ethnicity 11 12 .2154 .2145 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .1681 .1679 .00023 1 492 0.  Intercept Differences for Sex 8 9 .1679 .1344 .03349 1 493 19.  Typing & Word Processing 1985-1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Intercept Differences for Ethnicity 11 12 .1324 .1278 .00464 1 446 2.  Typing & Word Processing 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1967 .1955 .00113 1 631 0.  Intercept Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.	Secretary & Office Education 198	35 - 1986	Junior (Ethni	city = Wh	ite & Nonwhit	e) (Sex not	t teste	ed)	
Secretary & Office Education 1904 - 1945 Senior (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity	Slope Differences for Ethnicity	10	11	.1019	.1014	.00050	1	215	0.12
Stope Differences for Ethnicity	Intercept Differences for Ethnicity	11	12	. 1014	.1008	.00063	1	216	0.15
Typing & Word Processing 1984 - 1985   Freshmen   (Ethnicity not tested)	Secretary & Office Education 198	4 - 14d5	Senior (Ethni	city = Wh	ite & Nonwhit	e) (Sex no	t teste	ed)	
Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .2246 .2246 .00000 1 507 0.  Intercept Differences for Sex 8 y .2246 .2145 .01013 1 508 6.  Typing & Word Processing 1984-1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2167 .2154 .00129 2 505 0.  Intercept Differences for Ethnicity 11 12 .2154 .2145 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .1681 .1679 .00023 1 492 0.  Intercept Differences for Sex 8 9 .1679 .1344 .03349 1 493 19.  Typing & Word Processing 1985-1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Intercept Differences for Ethnicity 11 12 .1324 .1278 .00464 1 446 2.  Typing & Word Processing 1984 · 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1967 .1955 .00113 1 631 0.  Typing & Word Processing 1984 · 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.	Slope Differences for Ethnicity	10	11	.1190	.1141	.00490	1	220	1.22
Stope Differences for Sex   7 8	Intercept Differences for Ethnicity	11	12	.1141	. 1082	. 00589	1	221	1.47
Typing & Word Processing 1984-1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not tested)	Typing & Word Processing 1984 -	1985 Fre	shmen (Ethnic	ity not t	ested)				
Typing & Word Processing 1984-1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2167 .2154 .00129 2 505 0.  Intercept Differences for Ethnicity 11 12 .2154 .2145 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .1681 .1679 .00023 1 492 0.  Intercept Differences for Sex 8 9 .1679 .1344 .03349 1 493 19.  Typing & Word Processing 1985-1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Intercept Differences for Ethnicity 11 12 .1324 .1278 .00464 1 446 2.  Typing & Word Processing 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1967 .1955 .00113 1 631 0.  Intercept Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.	Slope Differences for Sex	7	8	.2246	.2246	.00000	1	507	0.00
Stope Differences for Ethnicity	Intercept Differences for Sex	8	y	.2246	. 2145	.01013	1	508	6.63
Intercept Differences for Ethnicity 11 12 .2154 .2145 .00093 2 507 0.  Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .1681 .1679 .00023 1 492 0.  Intercept Differences for Sex 8 9 .1679 .1344 .03349 1 493 19.  Typing & Word Processing 1985-1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Intercept Differences for Ethnicity 11 12 .1324 .1278 .00464 1 446 2.  Typing & Word Processing 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1967 .1955 .00113 1 631 0.  Intercept Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1540 .1539 .00009 2 629 0.	Typing & Word Processing 1984	1985 Fre	shmen (Ethnici	ty = Whit	e, Black & Hi	spanic) (S	ex not	tested)	
Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .1681 .1679 .00023 1 492 0.  Intercept Differences for Sex 8 9 .1679 .1344 .03349 1 493 19.  Typing & Word Processing 1985-1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Intercept Differences for Ethnicity 11 12 .1324 .1278 .00464 1 446 2.  Typing & Word Processing 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1967 .1955 .00113 1 631 0.  Intercept Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1540 .1539 .00009 2 629 0.	Slope Differences for Ethnicity	10	11	.2167	. 2154	.00129	2	505	0.41
Stope Differences for Sex   7	Intercept Differences for Ethnicity	11	12	.2154	.2145	.00093	2	507	0.30
Typing & Word Processing 1985-1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)   Slope Differences for Ethnicity	Typing & Word Processing 1985 -	1986 Fre	shmen (Ethnic	ity not 1	ested)				
Typing & Word Processing 1985-1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1342 .1324 .00177 1 445 0.  Intercept Differences for Ethnicity 11 12 .1324 .1278 .00464 1 446 2.  Typing & Word Processing 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1967 .1955 .00113 1 631 0.  Intercept Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1540 .1539 .00009 2 629 0.	Slope Differences for Sex	7	8	. 1681	.1679	.00023	1	492	0.14
Stope Differences for Ethnicity   10	Intercept Differences for Sex	8	9	.1679	.1344	.03349	1	493	19.84 *1
Typing & Word Processing 1984 - 1985 Sophomore (Ethnicity not tested)           Slope Differences for Sex         7         8         .1967         .1955         .00113         1         631         0.           Intercept Differences for Sex         8         9         .1955         .1523         .04326         1         632         33           Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)           Slope Differences for Ethnicity         10         11         .1540         .1539         .00009         2         629         0.	Typing & Word Processing 1985	-1986 Fre	shmen (Ethnici	ty = Whit	(e & Hispanic)	(Sex not	tested	)	
Typing & Word Processing 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1967 .1955 .00113 1 631 0.  Intercept Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1540 .1539 .00009 2 629 0.	Slope Differences for Ethnicity	10	11	. 1342	. 1324	.00177	1	445	0.91
Slope Differences for Sex       7       8       .1967       .1955       .00113       1       631       0         Intercept Differences for Sex       8       9       .1955       .1523       .04326       1       632       33    Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested) Slope Differences for Ethnicity       10       11       .1540       .1539       .00009       2       629       0	Intercept Differences for Ethnicity	11	12	. 1324	.1278	.00464	1	446	2.39
Intercept Differences for Sex 8 9 .1955 .1523 .04326 1 632 33.  Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1540 .1539 .00009 2 629 0.	Typing & Word Processing 1984	1985 Soph	omore (Ethnic	ity not 1	tested)				
Typing & Word Processing 1984-1985 Sophomore (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1540 .1539 .00009 2 629 0.	Slope Differences for Sex	7	8	.1967	. 1955	.00113	1	631	0.89
Slope Differences for Ethnicity 10 11 .1540 .1539 .00009 2 629 0.	Intercept Differences for Sex	8	9	. 1955	. 1523	.04326	1	632	33.98 *
	Typing & Word Processing 1984-	1985 Soph	omore (Ethnici	ty = Whi	te, Black & Hi	spanic) (S	ex not	tested)	
Intercept Differences for Ethnicity 11 12 .1539 .1523 .00166 2 631 0.	Slope Differences for Ethnicity	10	11	. 1540	. 1539	.00009	2	629	0.03
	Intercept Differences for Ethnicity	11	12	. 1539	. 1523	.00166	2	631	0.62

Table D-1. (Continued)

	Co	mparison	f	2		· ·		
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Typing & Word Processing 1985 -	1986 Soph	omore (Ethnici	ty not to	ested)			<u>_</u>	
Slope Differences for Sex	7	8	. 1620	. 1564	.00563	1	405	2.72
Intercept Differences for Sex	8	9	. 1564	.1440	.01246	1	406	6.00
Typing & Word Processing 1985	5-1986 Soph	omore (Ethnicit	y = White	e & Black) (S	ex not test	ed)		
Slope Differences for Ethnicity	10	11	.1419	.1408	.00109	1	374	0.48
Intercept Differences for Ethnicity	11	12	.1408	.1394	.00147	1	375	0.64
Typing & Word Processing 1984	- 1985 Ju	nior (Ethnicii	y not te	sted)				
Slope Differences for Sex	7	8	.2159	.2136	.00227	1	391	1.13
Intercept Differences for Sex	8	9	.2136	.1491	.06446	1	392	32.13 **
Typing & Word Processing 19	984-1985 Ju	nior (Ethnicity	/ = White	& Black) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	. 1595	.1591	.00048	1	359	0.20
Intercept Differences for Ethnicity	11	12	. 1591	. 1531	.00592	1	360	2.53
Typing & Word Processing 198	5 - 1986 Ju	nior (Ethnici)	ty not te	sted)				
Slope Differences for Sex	7	8	.1529	.1508	.00214	1	221	0.56
Intercept Differences for Sex	8	9	. 1508	.1068	.04400	1	555	11.50 **
Typing & Word Processing 19	985-1986 Ju	nior (Ethnicity	y = White	& Nonwhite)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	.1262	.1192	.00696	1	221	1.76
Intercept Differences for Ethnicity	11	12	.1192	. 1068	.01241	1	222	3.13
Typing & Word Processing 198	4 - 1985 Se	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.2188	.2174	.00142	1	216	0.39
Intercept Differences for Sex	8	9	.2174	. 1894	.02806	1	217	7.78 *
Accounting/Bookkeeping 1985	- 1986 Soph	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.2104	.2086	.00182	1	311	0.72
Intercept Differences for Sex	8	9	.2086	. 1534	.05515	1	312	21.74 **
Accounting/Bookkeeping 1984	- 1985 Jur	nior (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2857	.2808	.00487	1	239	1.63
Intercept Differences for Sex	8	9	.2808	.1888	.09204	1	240	30.71 **
Accounting/Bookkeeping 1985	- 1986 Jur	nior (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	. 1066	.0986	.00792	1	185	1.64
Intercept Differences for Sex	8	9	.0986	.0650	.03367	1	186	6.95 *
Accounting/Bookkeeping 1984	- 1985 Ser	nior (Ethnicit	y riot tes	ted)				
Slope Differences for Sex	7	8	. 1941	. 1937	.00038	1	247	0.12
Intercept Differences for Sex	8	9	. 1937	. 1587	.03497	1	248	10.76 *

<u>Table D-1</u>. (Continued)

	Сонф	ar ison	F	,2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1984 - 198	5 Freshmen	(Ethnicity no	ot tested:	<del></del>			<del></del>	<del></del>
Slope Differences for Sex	7	8	.2148	.2128	.00197	1	547	1.37
Intercept Differences for Sex	8	9	.2128	.1679	.04492	1	548	31.27 **
Home Economics 1984-198	5 Freshmen	(Ethnicity = 1	white & Bl	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.2310	.2287	.00229	1	519	1.54
Intercept Differences for Ethnicity	11	12	.2288	. 1565	.07228	1	520	48.73**
Home Economics 1985 - 198	6 Freshmen	(Ethnicity no	ot tested	)				
Slope Differences for Sex	7	8	.1782	.1778	.00046	1	312	0.17
Intercept Differences for Sex	8	Ò	.1778	.1173	.06050	1	313	23.03 **
Home Economics 1985-198	6 Freshmen	(Ethnicity = 1	⊌hite & No	onwhite) (Sex	not tested	i)		
Slope Differences for Ethnicity	10	11	. 1219	.1216	.00029	1	312	0.10
Intercept Differences for Ethnicity	11	12	.1216	.1173	.00430	1	313	1.53
Home Economics 1984 - 198	35 Sophomore	(Ethnicity	not tester	<b>d)</b>				
Stope Differences for Sex	7	8	.1864	. 1864	.00002	1	321	0.01
Intercept Differences for Sex	8	9	. 1864	.1267	.05968	1	322	23.62 **
Home Economics 1984-1989	Sophomore :	(Ethnicity = 1	⊌hite & No	onwhite) (Sex	not tested	<b>3</b> )		
Slope Differences for Ethnicity	10	11	.1661	.1582	.00785	1	321	3.02
Intercept Differences for Ethnicity	11	12	. 1582	.1267	.03154	1	322	12.07**
Home Economics 1985 - 198	86 Sophomore	(Ethnicity	not tester	d)				
Slope Differences for Sex	7	8	. 1726	. 1725	.00010	1	394	0.05
Intercept Differences for Sex	8	9	. 1725	.1108	.06169	1	395	29.44 **
Home Economics 1985-1986	Sophomore	(Ethnicity =	⊌hite & N	onwhite) (Sex	not tested	4)		
Slope Differences for Ethnicity	10	11	.1117	.1116	.00008	1	394	0.04
Intercept Differences for Ethnicity	11	12	.1116	.1108	.00083	1	<b>3</b> 95	0.37
Home Economics 1984 - 1	985 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1547	.1547	.00001	1	279	0.00
Intercept Differences for Sex	8	9	. 1547	.1236	.03108	1	280	10.29 *
Home Economics 1984-19	35 Junior (E	thnicity = Wh	ite & Non	white) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.1268	.1268	.00001	1	279	0.00
Intercept Differences for Ethnicity	11	12	.1268	.1236	.00324	1	280	1.04
Home Economics 1985 - 1	986 Junior	(Ethnicity no	t tasted)					
Slope Differences for Sex	7	8	. 1912	.1898	.00138	1	358	0.61
Intercept Differences for Sex	8	9	.1898	.0790	.11085	1	359	49.12 **
Home Economics 1985-19	36 Junior (E	thnicity = Wh	ite & Non	white) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.0843	.0814	.00292	1	<b>3</b> 58	1.14
Intercept Differences for Ethnicity	11	12	.0814	.0790			359	0.94

Table D-1. (Concluded)

	Co	mparison	f	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1984 - 198	35 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1897	.1880	.00171	1	318	0.57
Intercept Differences for Sex	8	9	.1880	. 1457	.04230	1	319	16.62 **
Nome Economics 1984-198	35 Senior	(Ethnicity = W	ille & Nor	nahite)(Sex	not tested)	)		
Slope Differences for Ethnicity	10	11	. 1573	.1486	.00872	1	318	3.29
Intercept Differences for Ethnicity	11	12	.1486	.1457	.00285	1	319	1.07
Computer Programming 1985 - 19	986 Sophor	ore (Ethnicit	y not test	ted)				
Stope Differences for Sex	7	8	.2430	.2429	.00013	1	227	0.04
Intercept Differences for Sex	8	9	.2429	. 1669	.07597	1	228	22.88 **
Computer Programming 1984 -	1985 Juni	or (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.2182	.2170	.00115	1	240	0.35
Intercept Differences for Sex	8	9	.2170	.1957	.02134	1	241	6.57
Computer Programming 1985 -	1986 Juni	or (Ethnicit	y not test	ted)				
Slope Differences for Sex	7	8	.3068	.3055	.00134	1	157	0.30
Intercept Differences for Sex	8	9	.3055	. 1926	. 11286	1	158	25.68 **
Computer Programming 1984 -	1985 Seni	or (Ethnicit	y not tes	tcd)				
Slope Differences for Sex	7	8	.1788	.1767	.00209	1	152	0.39
Intercept Differences for Sex	8	9	. 1767	.1748	.00193	1	153	0.36

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

<u>Table D-2</u>, F-Tests of Significance for Verbal Composite

	Соп	parison		R <sup>2</sup>			<del></del>	
F-Test Comparison	rull	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
English I - IV 1984 - 1	985 Fres	hmen (Ethnici	ty = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2267	. 2263	.00043	2	2,422	0.67
Sex & Ethnicity Interaction Test	2	3	.2263	.2203	.00596	2	2,424	9.33 **
Consistent Over or Under prediction of Subgroup	2	4	.2263	. 2207	.00540	3	2,424	5.64 **
Slope Differences for Sex	2	5	.2263	.2225	.00380	1	2,424	11.91 **
Slope Differences for Ethnicity	2	6	.2263	.2241	.00223	2	2,424	3.50
English I - IV 198⁵ - 1	<b>986</b> Fres	hmen (Ethnici	ty = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1832	.1829	.00025	2	1,989	0.31
Sex & Ethnicity Interaction Test	2	3	.1829	.1798	.00314	2	1,991	3.83
Stope Differences for Sex	7	8	.1720	.1717	.00029	1	1,997	0.70
Intercept Differences for Sex	8	9	.1717	.1359	.03583	1	1,998	86.43 **
Slope Differences for Ethnicity	10	11	.1426	. 1371	.00546	2	1,995	6.36 *
Inmercept Differences for Ethnicity	11	12	. 1371	.1359	.00123	2	1,997	1.43
English I - IV 1984 - 19	85 Sopho	more (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2545	.2545	00003	2	2,295	5.05
Sex & Ethnicity Interaction Test	2	3	.2545	.2521	.00241	2	2,298	3.71
Slope Differences for Sex	7	8	.2519	. 2421	.00972	1	2,304	29.93 **
Slope Differences for Ethnicity	10	11	,1911	.1909	.00023	2	2,302	0.33
Intercept Differences for Ethnicity	11	12	.1909	. 1904	.00053	2	2,304	0.75
Englich 1 - IV 1985 - 19	986 Sopho	more (Ethnic	ity = Whi	te. Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2287	.2282	.00052	2	1,942	0.66
Sex & Ethnicity Interaction Test	2	3	.2282	.2267	.00154	2	1,944	1.94
Slope Differences for Sex	7	8	.2224	.2132	.00921	1	1,950	23.11 **
Slope Differences for Ethnicity	10	11	.1609	.1601	.00087	2	1,948	1,01
Intercept Differences for Ethnicity	11	12	.1601	.1542	.00582	2	1,950	6.75 *
English 1 - IV 1984 -	1285 Jun	nior (Ethnici	ty = Whíi	e. Black & Hi	spanic)			
3-way Interact: on Test (ASVAB*sex*ethnicity)	1	2	.2319	.2316	.00030	2	1,721	0.34
Sex & Ethnicity Interaction Test	2	3	.2316	. 2309	.00074	2	1,723	0.83
Slope Diff ences for Sex	7	8	.2283	. 2195	.00885	1	1,729	19.84 **
Slope Differences for Ethnicity	10	11	.1484	.1470	.00137	2	1,727	1.39
Intercept Differences for Ethnicity	11	12	.1470	.1444	.00259	2	1,729	2.62
English 1 - IV 1985 -	1986 Jun	nior (Ethnici	tv = Whil	te, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2077	.2076	.00012	1	1,258	C.19
Sex & Ethnicity Interaction Test	2	3	.2076	.2072	.00038	1	1,259	0.60
Slope Differences for Sex	7	8	.2069	.1985	.00840	1	1,262	13.37 **
Slope Differences for Ethnicity	10	11	.1178	.1177	.00005	1	1,262	0.07
Intercept Differences for Ethnicity	11	12	.1177		.00021	1	1,263	0.30
English I - IV 1984	1985 Ser	niar (Ethnici	ty = Uhii	te, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1737		.00163	2.	1,275	1.25
Sex & Ethnicity Interaction Test	2	3	.1721	.1714	.00056	2	1,277	0.51
Slope Differences for Sex	7	8	.1634	. 1594	.00399	1	1,283	6.12
Intercept Differences for Sex	8	9	.1594	.1394	.02873			
•	10	11				1	1,284	43.89 **
Slope Differences for Ethnicity			.1355	.1310	.00446	2	1,281	3.31
Intercept Differences for Ethnicity	11	12	.1311	. 1307	.00035	2	1,283	0.26

Table D-2. (Continued)

F Test Comparison  General Math 1984 - 1984	full 985 Fresh 1		ricted	Full	Restricted	2			
					Kestricted	R <sup>2</sup> Change	df1	df <u>2</u>	F
3-way Interaction Test (ASVAB*sex*ethnicity)	1	IIIICII	(Ethnicii	ty = White	e, Black & His	spanic)			
_ ,			2	.0543	.0538	.00058	2	1,167	0.36
Sex & Ethnicity Interaction Test	2		3	.0538	.0494	.00434	2	1,169	2.68
Slope Differences for Sex	7		8	.0474	.0474	.00009	1	1,175	0.11
Intercept Differences for Sex	8		9	.0174	.0387	.00870	1	1,176	10.74 *
Slope Differences for Ethnicity	10		11	.0411	.0408	.00031	2	1,173	0.19
Intercept Differences for Ethnicity	11		12	.0408	.0387	.00217	2	1,175	1.33
General Math 1984 - 19	85 Sopho	опоге	(Ethnic	ity≃ ⊌hi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.0529	. 0525	.00046	2.	736	0.18
Sex & Ethnicity Interaction Test	2		3	.0525	.0465	.00602	2	738	2.34
Slope Differences for Sex	7		8	.0363	. 0362	.00005	1	744	0.04
Intercept Differences for Sex	8		9	.0362	.0338	.00248	1	745	1.91
Slope Differences for Ethnicity	10		11	.0443	. 0419	.00241	2	742	0.94
Intercept Differences for Ethnicity	11		12	.0419	.0338	.00807	2	744	3.13
General Math 1985 - 19	586 <b>S</b> opho	ornor e	(Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.1001	.0955	.00461	1	305	1.56
Sex & Ethnicity Interaction Test	2		3	.0955	.0935	.00199	1	306	0.67
Slope Differences for Sex	7		8	.0792	.0788	.00043	1	309	0.14
Intercept Differences for Sex	8		9	.0788	.0411	.03767	1	310	12.68 **
Slope Differences for Ethnicity	10		11	.0549	.0538	.00117	1	309	0.38
Intercept Differences for Ethnicity	11		12	.0537	.0411	.01261	1	310	4.13
General Math 1984 -	1985 Juni	ior (	Ethnicit	y = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.0484	.0472	.00123	1	266	0.34
Sex & Ethnicity Interaction Test	2		3	.0472	.0471	.00007	1	267	0.02
Slope Differences for Sex	7		8	.0392	.0376	.00161	1	270	0.45
Intercept Differences for Sex	8		9	.0376	.0147	.02295	1	271	6.46
Slope Differences for Ethnicity	10		11	.0213	. 0196	.00165	1	270	0.45
Intercept Differences for Ethnicity	11		12	.0196	.0147	.00497	1	271	1.37
General Math 1985 - 1986	Junior (	(Ethni	icity not	tested)					
Slope Differences for Sex	7		8	.1142	.1108	.00340	1	222	0.85
Intercept Differences for Sex	8		9	.1108	. 0831	.02770	1	223	6.95 •
General Math 1985 - 1986	Junior (	(Ethni	icity = W	hite & No	nwhite) (Sex :	not tested)	,		
Slope Differences for Ethnicity	10		11	.1086	. 1050	.00356	1	195	0.78
Intercept Differences for Ethnicity	11		12	.1050	.1036	.00141	1	196	0.31
General Math 1984 - 1985	Senior (	(Ethni	icity not	tested)					
Slope Differences for Sex	7	. =	8	.0469	.0456	.00133	1	230	0.32
Intercept Differences for Sex	8		9	.0456	.0452	.00033	1	231	0.08
General Math 1984 - 193	5 Senio	(Eth:	nicity = 1	Whita ደ º	lack) (Sov no	1 tecteril			
Slope Differences for Examinity	) Senior	(c (nr	110 ty = 1	white & B .0851	.0551	t testea) _ú⇔ò?	1	21,3	0.00
Intercept Differences for Ethnicity	11		12	.0851	.0600	.02505	1	204	5.59

Table D-2. (Continued)

Algebra 1984 - 1985 Freshmen   (Ethnicity & White & Norwhite)   3-way Interaction Test (ASVAB*sex*ethnicity)   1   2   1.162   .1606   .00559   1   1,180   sex & Ethnicity Interaction Test   2   3   .1406   .1605   .00007   1   1,181   .1		Соп	parison		R <sup>2</sup>				
3-way Interaction Test (ASVAB*sex*ethnicity)	-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	f
Sex & Ethnicity Interaction Test	Algebra 1984 - 1985	Freshmen	(Ethnicity	= White &	Norwhite)				
1,184	S-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1462	.1406	.00559	1	1,180	7.72 *
Intercept Differences for Sex   8   9   .1357   .0087   .03702   1   1,185	Sex & Ethnicity Interaction Test	2	3	.1406	. 1405	.00007	1	1,181	0.09
Algebra 1985 - 1986 Soptionare   Cethnicity   10   11   1042   1014   .00281   1   1,184	Slope Differences for Sex	7	8	.1388	,1357	.00310	1	1,184	4.27
Algebra 1985 - 1936 Freshmen   (Ethnicity = White & Norwhite)	Intercept Differences for Sex	8	9	.1357	. 0987	.03702	1	1,185	50.76 **
Algebra 1985 - 1986 Freshmen (Ethnicity = White & Nonwhite) 3-way Interaction Test (ASVAP*sex*ethnicity)	Slope Differences for Ethnicity	10	11	.1042	. 1014	.00281	1	1,184	3.71
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1421 .1421 .00000 1 708 sex & Ethnicity Interaction Test 2 3 .1421 .1402 .00198 1 709 sex & Ethnicity Interaction Test 2 3 .1421 .1402 .00198 1 709 .0008 1 712 Intercept Differences for Sex 7 8 .1356 .1359 .00068 1 712 Intercept Differences for Sex 8 9 .1359 .0095 .03645 1 713 .1009 .00016 1 712 .1009 .00016 1 712 .1009 .00016 1 712 .1009 .00016 1 712 .1009 .00016 1 712 .1009 .00016 1 713 .1009 .00016 .1009 .00016 1 713 .1009 .00016 .1009	Intercept Differences for Ethnicity	11	12	.1014	. 0987	.00266	1	1,185	3.51
Stope Differences for Sex	Algebra 1985 - 1986	Freshmen	(Ethnicity	= White &	Nonwhite)				
Stope Differences for Sex	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1421	.1421	.00000	1	708	0.00
Intercept Differences for Sex	Sex & Ethnicity Interaction Test	2	3	.1421	.1402	.00198	1	709	1.64
Algebra 1985 - 1986 Sophonore   (Ethnicity = White & Norwhite)	Slope Differences for Sex	7	8	.1366	. 1359	.00068	1	712	0.56
Algebra 1984 - 1985 Sophomore   (Ethnicity = White & Nonwhite)   3-way Interaction Test (ASVAB*sex*ethnicity)   1   2   .0909   .0909   .00004   1   .871   .872   .0909   .0909   .00004   1   .872   .0909   .0909   .00004   1   .872   .0909   .0909   .00004   1   .872   .0909   .0909   .00004   1   .872   .0909   .0909   .00004   1   .872   .0909   .0909   .00004   1   .872   .0909   .00094   1   .872   .0009   .00094   1   .872   .0009   .00094   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   1   .0009   .00004   .00004   .00004   .00004   .00004   .00004   .00004   .00004   .00004   .00004   .00007   1   .0009   .000004   .00007   1   .00009   .000007   1   .00009   .000007   1   .00009   .000007   1   .00009   .000007   .0000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .0000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .000007   .0000007   .0000007   .0000007   .0000007   .0000007   .0000007   .0000007   .0000007   .0000007	Intercept Differences for Sex	8	9	. 1359	.0995	. 03645	1	713	30.08 **
Algebra 1984 - 1985 Soplanore (Ethnicity = White & Nonwhite) 3-way Interaction Test (ASVAB*scx*ethnicity)	Slope Differences for Ethnicity	10	11	.1031	. 1029	.00016	1	712	0.13
3-way Interaction Test (ASVAB*sex*ethnicity)	Intercept Differences for Ethnicity	11	12	. 1029	. 0995	.00343	î	713	2.73
Stope Differences for Sex   7   8   .0832   .0818   .00140   1   872	Algebra 1984 - 1985	Sophonor	e (Ethnicity	= White	& Nonwhite)				
Stope Differences for Sex	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0909	. 0909	. 00004	1	871	0.04
Intercept Differences for Sex	Sex & Ethnicity Interaction Test	2	3	.0909	.0859	.00494	1	872	4.74
Slope Differences for Ethnicity	Slope Differences for Sex	7	8	.0832	.0815	.00140	1	875	1.34
Algebra 1985 - 1986 Sophonore (Ethnicity = White & Nonwhite)  3-way Interaction Test (ASVAB*sex*ethnicity)	Intercept Differences for Sex	8	۶	.0818	.0584	.02346	1	876	22.38 **
Algebra 1985 - 1986 Sophonore (Ethnicity = White & Nonwhite) 3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .0880 .0875 .00052 1 617 Sex & Ethnicity Interaction Test 2 3 .0875 .0834 .00412 1 618 Slope Differences for Sex 7 8 .0745 .0725 .00205 1 621 Intercept Differences for Sex 8 9 .0725 .0586 .01389 1 622 Slope Differences for Ethnicity 10 11 .0653 .0645 .00079 1 621 Intercept Differences for Ethnicity 11 12 .0645 .0586 .00595 1 622  Algebra 1984 - 1985 Junior (Ethnicity = White & Black)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1234 .1217 .00172 1 489 Sex & Ethnicity Interaction Test 2 3 .1217 .1195 .00220 1 490 Slope Differences for Sex 7 8 .1068 .1065 .00028 1 493 Intercept Differences for Sex 8 9 .1065 .0788 .02774 1 494 Slope Differences for Ethnicity 10 11 .0919 .0801 .01162 1 493 Intercept Differences for Ethnicity 11 12 .0801 .0783 .00132 1 494  Algebra 1985 - 1986 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1011 .0993 .00180 1 273 Intercept Differences for Sex 8 9 .0993 .0933 .00602 1 274	Slope Differences for Ethnicity	10	11	.0602	. 0584	.00178	1	875	1.66
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .0880 .0875 .00052 1 617 Sex & Ethnicity Interaction Test 2 3 .0875 .0834 .00412 1 618 Slope Differences for Sex 7 8 .0745 .0725 .00205 1 621 Intercept Differences for Sex 8 9 .0725 .0586 .01389 1 622 Slope Differences for Ethnicity 10 11 .0653 .0645 .00079 1 621 Intercept Differences for Ethnicity 11 12 .0645 .0586 .00595 1 622  Algebra 1984 - 1985 Junior (Ethnicity = White & Black)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1234 .1217 .00172 1 489 Sex & Ethnicity Interaction Test 2 3 .1217 .1195 .00220 1 490 Slope Differences for Sex 7 8 .1068 .1065 .00028 1 493 Intercept Differences for Sex 8 9 .1065 .0788 .02774 1 494 Slope Differences for Ethnicity 10 11 .0919 .0801 .01182 1 493 Intercept Differences for Ethnicity 11 12 .0801 .0783 .00132 1 494  Algebra 1985 - 1986 Junior (Ethnicity not tested) Slope Differences for Sex 7 8 .1011 .0993 .00180 1 273 Intercept Differences for Sex 8 9 .0993 .0933 .00602 1 274	Intercept Differences for Ethnicity	11	12	.0584	.0584	.00007	1	876	0.06
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .0880 .0875 .00052 1 617 Sex & Ethnicity Interaction Test 2 3 .0875 .0834 .00412 1 618 Slope Differences for Sex 7 8 .0745 .0725 .00205 1 621 Intercept Differences for Sex 8 9 .0725 .0586 .01389 1 622 Slope Differences for Ethnicity 10 11 .0653 .0645 .00079 1 621 Intercept Differences for Ethnicity 11 12 .0645 .0586 .00595 1 622  Algebra 1984 - 1985 Junior (Ethnicity = White & Black)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1234 .1217 .00172 1 489 Sex & Ethnicity Interaction Test 2 3 .1217 .1195 .00220 1 490 Slope Differences for Sex 7 8 .1068 .1065 .00028 1 493 Intercept Differences for Sex 8 9 .1065 .0788 .02774 1 494 Slope Differences for Ethnicity 10 11 .0919 .0801 .01182 1 493 Intercept Differences for Ethnicity 11 12 .0801 .0783 .00132 1 494  Algebra 1985 - 1986 Junior (Ethnicity not tested) Slope Differences for Sex 7 8 .1011 .0993 .00180 1 273 Intercept Differences for Sex 8 9 .0993 .0933 .00602 1 274	Algebra 1985 - 1986	Sophonor	e (Ethnicity	⁄≃ White	& Nonwhite)				
Slope Differences for Sex   7			•			.00052	1	617	0.35
Intercept Differences for Sex	Sex & Ethnicity Interaction Test	2	3	.0875	. 0834	.00412	1	618	2.79
Slope Differences for Ethnicity   10	Slope Differences for Sex	7	8	.0745	.0725	.00205	1	621	1.37
Algebra 1984 - 1985 Junior (Ethnicity = White & Black)   3-Way Interaction Test (ASVAB*sex*ethnicity)   1   2   .1234   .1217   .00172   1   489   Sex & Ethnicity Interaction Test   2   3   .1217   .1195   .00220   1   490   Slope Differences for Sex   7   8   .1068   .1065   .00028   1   493   Intercept Differences for Sex   8   9   .1065   .0788   .02774   1   494   Slope Differences for Ethnicity   10   11   .0919   .0801   .01182   1   493   Intercept Differences for Ethnicity   11   12   .0801   .0783   .00132   1   494	Intercept Differences for Sex	8	9	.0725	.0586	.01389	1	622	9.32 *
Algebra 1984 - 1985 Junior (Ethnicity = White & Black)  3-way Interaction Test (ASVAR*sex*ethnicity)	Slope Differences for Ethnicity	10	11	.0653	.0645	.00079	1	621	0.53
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1234 .1217 .00172 1 489 Sex & Ethnicity Interaction Test 2 3 .1217 .1195 .00220 1 490 Slope Differences for Sex 7 8 .1068 .1065 .00028 1 493 Intercept Differences for Sex 8 9 .1065 .0788 .02774 1 494 Slope Differences for Ethnicity 10 11 .0919 .0801 .01182 1 493 Intercept Differences for Ethnicity 11 12 .0801 .0783 .00132 1 494  Algebra 1985 - 1986 Junior (Ethnicity not tested) Slope Differences for Sex 8 9 .0993 .00180 1 273 Intercept Differences for Sex 8 9 .0993 .0933 .00602 1 274	Intercept Differences for Ethnicity	11	12	. 0645	.0586	.00595	1	622	3.95
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1234 .1217 .00172 1 489 Sex & Ethnicity Interaction Test 2 3 .1217 .1195 .00220 1 490 Slope Differences for Sex 7 8 .1068 .1065 .00028 1 493 Intercept Differences for Sex 8 9 .1065 .0788 .02774 1 494 Slope Differences for Ethnicity 10 11 .0919 .0801 .01182 1 493 Intercept Differences for Ethnicity 11 12 .0801 .0783 .00132 1 494  Algebra 1985 - 1986 Junior (Ethnicity not tested) Slope Differences for Sex 8 9 .0993 .00180 1 273 Intercept Differences for Sex 8 9 .0993 .0933 .00602 1 274	Algebra 1984 - 19	85 Junior	(Ethnicity	= White &	Black)				
Sex & Ethnicity Interaction Test       2       3       .1217       .1195       .00220       1       490         Stope Differences for Sex       7       8       .1068       .1065       .00028       1       493         Intercept Differences for Sex       8       9       .1065       .0788       .02774       1       494         Stope Differences for Ethnicity       10       11       .0919       .0801       .01182       1       493         Intercept Differences for Ethnicity       11       12       .0801       .0783       .00132       1       494         Algebra 1985 - 1986 Junior       (Ethnicity not tested)         Stope Differences for Sex       7       8       .1011       .0993       .00180       1       .273         Intercept Differences for Sex       8       9       .0993       .0933       .00602       1       .274		_	_			.00172	1	489	0.96
Stope Differences for Sex       7       8       .1068       .1065       .00028       1       .493         Intercept Differences for Sex       8       9       .1065       .0788       .02774       1       .494         Stope Differences for Ethnicity       10       11       .0919       .0801       .01182       1       .493         Algebra 1985 - 1986 Junior       (Ethnicity not tested)         Stope Differences for Sex       7       8       .1011       .0993       .00180       1       .273         Intercept Differences for Sex       8       9       .0993       .0933       .00602       1       .274	•								1.23
Intercept Differences for Sex   8   9   .1065   .0788   .02774   1   494		7					1		0.15
Slope Differences for Ethnicity       10       11       .0919       .0801       .01182       1       493         Intercept Differences for Ethnicity       11       12       .0801       .0783       .00132       1       494         Algebra 1985 - 1986 Junior (Ethnicity not tested)         Slope Differences for Sex       7       8       .1011       .0993       .00180       1       .273         Intercept Differences for Sex       8       9       .0993       .0933       .00602       1       .274	•	8					1		15.34 *1
Algebra 1985 - 1986 Junior   (Ethnicity not tested)   Slope Differences for Sex   7   8   .1011   .0993   .00180   1   .273   Intercept Differences for Sex   8   9   .0993   .0933   .00602   1   .274	·								6.42
Slope Differences for Sex         7         8         .1011         .0993         .00180         1         .273           Intercept Differences for Sex         8         9         .0993         .0933         .00602         1         .274		11	12						0.71
Slope Differences for Sex         7         8         .1011         .0993         .00180         1         .273           Intercept Differences for Sex         8         9         .0993         .0933         .00602         1         .274	Allaebra 1985 - 1986 dee	iion (Fil	nnicity not te	ested)					
Intercept Differences for Sex 8 9 .0993 .0933 .00602 1 274	-				. n <b>oo</b> 3	-00180	1	273	0.55
Algebra 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)	•								1.83
Augusta 1707 1700 aution (comments - white a monunity) (and not tested)	Algebra 1085 - 1024	mior (E+)	micity = White	e E Nonch	site) (Sev por	testedi			
Slope Differences for Ethnicity 10 11 .1010 .0974 .00365 1 273							1	771	1.11
Intercept Differences for Ethnicity 11 12 .0974 .0932 .00410 1 274	•								1.24

Table D-2. (Continued)

		Co	mparison		<sub>R</sub> 2				
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfi	df2	F
	Algebra 1984 - 1985	Senior (Et	hnicity not te	sted)					
Slope Differences for	Sex	7	8	.0725	.0701	.00238	1	265	0.68
Intercept Differences	for Sex	8	9	.0701	.0366	.03355	1	266	9.60
	Algebra 1984 - 198	5 Senior (Et	hnicity = White	e & Nonwii	ite) (Sex not	tested)			
Slope Differences for	Ethnicity	10	11	.0548	.0372	.01758	1	265	4.93
Intercept Differences	for Ethnicity	11	12	.0373	.0366	.00069	1	266	0.19
	Geometry 1985 - 1986	Freshmen (	Ethnicity not	tested)					
Slope Differences for	Sex	7	8	.1619	.1617	.00016	1	511	0.10
Intercept Differences	for Sex	8	9	.1617	.1592	.00258	1	512	1.58
Ge	eometry 1985 - 1986 Fr	eshmen (Ethn	icity = White,	Black &	Hispanic) (Se	x not teste	ed)		
Slope Differences for		10	11	.1643	.1623	.00198	2	509	0.60
Intercept Differences	for Ethnicity	11	12	.1624	. 1591	.00322	2	511	0.98
	Geometry 1984 - 1985	Sophomore (	Ethnicity not	test <b>ed)</b>					
Stope Differences for	Sex	7	8	.1570	.1560	.00096	1	561	0.64
Intercept Differences	for Sex	8	9	.1560	.1504	.00562	1	562	3.74
G	cometry 1984 - 1985 Sc	phomore (Eth	nicity = White	, Black &	: Hispanic) (\$	ex not tes	tcd)		
Slope Differences for	Ethnicity	10	11	.1564	. 1534	.00298	2	559	0.99
Intercept Differences	for Ethnicity	11	12	.1534	. 1504	.00297	2	561	0.98
	Geometry 1985 - 1986	Sophomore (E	thnicity not t	ested)					
Slope Differences for	Sex	7	8	.2009	.2005	.00034	1	410	0.17
Intercept Differences	for Sex	8	9	.2005	. 1805	.02000	1	411	10.28
	Geometry 1985 - 19	986 Sophomore	(Ethnicity =	White & B	llack) (Sex no	t tested)			
Slope Differences for	Ethnicity	10	11	.2095	. 1903	.01925	1	371	9.03
	Geometry 1984 - 198	35 Junior (E	thnicity not t	ested)					
Stope Differences for	Sex	7	8	.1418	. 1413	.00048	1	30°	0.17
Intercept Differences	for Sex	8	9	.1413	.1259	.01541	1	306	5.49
	Geometry 1984 - 19	985 Junior (é	thnicity = Whi	te & Nonw	white) (Sex no	t tested)			
Slope Differences for	Ethnicity	10	11	.1296	. 1290	.00054	1	305	0.19
Intercept Differences	for Ethnicity	11	12	. <b>129</b> 0	.1259	.00312	1	306	1.09
	Geometry 1985 - 198	B6 Junior (E	Ethnicity not t	ested)					
Slope Differences for	Sex	7	8	.0973	.0964	.00088	1	123	0.12
Intercept Differences	for Sex	8	9	.0965	. 0928	.00362	1	124	0.50
	Geometry 1985 - 19	986 Junior (6	Ethnicity = Whi	te & None	white) (Sex no	ot tested)			
Slope Differences for	Ethnicity	10	11	.2213	.1980	.02332	1	123	3.68
Intercept Differences	for Ethnicity	11	12	.1980	. 0929	.10512	1	124	16.25

<u>Table D-2</u>. (Continued)

	Co	mparison		<sub>6</sub> 2				
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df≥	F
Geometry 1984 - 1985 Sen	ior (E	thnicity not to	est <b>ed)</b>					
Slope Differences for Sex	7	8	. 1383	. 1373	.00097	1	107	0.12
Intercept Differences for Sex	8	9	.1373	. 1326	.00475	1	108	0.60
Geometry 1984 - 1985 Sei	nior (E	thnicity = Whi	te & Nonwi	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.1725	.1714	.00106	1	107	0.14
Intercept Differences for Ethnicity	11	12	.1714	.1326	.03887	1	108	5.07
Calculus 1985 - 1986 Jun	ior (E	thnicity not to	est <b>ed</b> )					
Slope Differences for Sex	7	8	.0549	.0521	.00281	ì	147	0.44
Intercept Differences for Sex	8	9	.0521	.0500	.00213	1	148	0.33
General Science 1984 - 1	985 Fre	shinen (Ethnic	ity = Whi	te, Black & H	ispanio)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	?	.2404	.2372	.00324	2	1,050	4.17
Sex & Ethnicity Interaction Test	2	3	.2372	.2285	.00870	5	1,958	11.16 **
Consistent Over or Under prediction of Subgroup	2	4	.2372	.2358	.00141	3	1,958	1.21
General Science 1985 - 1986	Eneshbo	en (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	,1191	.1181	.00097	1	274	0.30
Intercept Differences for Sex	8	9	.1181	. 1097	.00842	1	275	2.63
General Science 1985 - 198	6 Frach	umen (Ethnicity	= Uhite	& Black) (Sox	not tester	41		
Slope Differences for Ethnicity	10	11	.1267	.1148	.01186	1	240	3.26
Intercept Differences for Ethnicity	11	12	.1148	.1148	.00000	1	241	0.00
General Science 1984 - 1	985 Son	shomore (Ethni	citu = Wh	ite & Morwhit	e)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2312	,2311	.00013	1	341	0.06
Sex & Ethnicity Interaction Test	2	3	.2311	.2189	.01218	1	342	5.42
Slope Differences for Sex	7	8	.1997	.1993	.00039	1	345	0.17
Intercept Differences for Sex	8	9	. 1993	.1611	.03825	1	346	16.53 *
Slope Differences for Ethnicity	10	11	.1870	. 1811	.00590	1	345	2.50
Intercept Differences for Ethnicity	11	12	.1812	.1611	.02004	1	346	8.47 *
General Science 1985 - 1986 S	ophomo:	re (Ethnicity	not teste	·d)				
Slope Differences for Sex	7	8	.1785	.1747	.00380	1	183	0.85
Intercept Differences for Sex	8	9	.1747	. 1469	.02776	1	184	6.19
General Science 1985 - 1986	Soobor	more (Ethnicity	= White	& Hlack) (Sex	nat teste	<b>4</b> )		
Slope Differences for Ethnicity	10	11	.1914	,1822	.00922	1	158	1.80
Intercept Differences for Ethnicity	11	12	.1822	. 1596	.02257	1	159	4.39
General Science 1984 - 1985	lunine	/Ethnicity on	• • • • • • • • • • • • • • • • • • •					
Slope Differences for Sex	7	8	.0680	.0673	.00072	1	174	0.13
Intercept Differences for Sex	8	9	.0673	.0673	.00072	1	174	3.63
Therefore of the chies for sex	O	7	.0073	.0479	.01733	'	17.2	ده. د
General Science 1984 - 19		·						
Slope Differences for Ethnicity	10	11	. 1335	. 1284	.00510	1	149	88.0
Intercept Differences for Ethnicity	11	12	.1284	. 0752	. 05 <b>3</b> 1ა	1	150	9.15 *

Table D-2. (Continued)

	Cor	mparison	1	,2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Science 1985 - 1986 .	Junior	(Ethnicity no	tested)	·				
Slope Differences for Sex	7	8	.2397	.2393	.00047	1	258	0.16
Intercept Differences for Sex	8	9	.2393	.2257	.01362	1	259	4.64
General Science 1985 - 1986	Junior	(Ethnicity = 1	hite & N	onwhite) (Sex	not tested	1)		
Slope Differences for Ethnicity	10	11	.2339	.2258	.00812	1	258	2.73
Intercept Differences for Ethnicity	11	12	.2258	.2257	.00010	1	259	0.03
General Science 1984 - 1985 :	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1104	. 1102	.00014	1	182	0.03
Intercept Differences for Sex	8	9	.1102	.0880	.02223	1	183	4.57
Biology 1 - 11 1984 - 1985 F	reshmen	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.1805	. 1805	.00005	1	299	0.02
Intercept Differences for Sex	8	9	.1805	. 1645	.01601	1	<b>3</b> 00	5.86
3ibiogy I - II 1984 - 1985	Freshme	n (Ethnicity =	White &	Nonwhite) (Se	x not test	:d)		
Slope Differences for Ethnicity	10	11	.1652	. 1649	.00030	1	299	0.11
Intercept Differences for Ethnicity	11	12	.1649	. 1645	.00048	1	<b>30</b> 0	0.17
Cretegy 1 - 11 1985 - 1	986 Fro	shmon (Ethnic	ity = Whi	te C Black)				
3-way Interaction Test (ASVAB*sex*etnnicity)	1	2	.1661	.1661	.00000	1	1,119	0.00
Sex & Ethnicity Interaction Test	2	3	.1661	. 1659	.00021	1	1,120	0.28
Slope Differences for Sex	7	3	.1640	. 1640	.00001	1	1,123	0.02
Intercept Differences for Sex	8	9	.1640	.1350	.02892	1	1,124	38.88 **
Slope Differences for Ethnicity	10	11	.1370	. 1369	.00001	1	1,123	0.01
Intercept Differences for Ethnicity	11	12	.1369	. 1350	.00189	1	1,124	2.46
Biology I - II 1984 - 19	85 Soph	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2267	. 2263	.60031	2	1,371	0.27
Sex & Ethnicity Interaction Test	2	3	.2264	.2160	.01040	2	1,373	9.23 **
Consistent Over or Under prediction of Subgroup	2	4	.2264	.2088	.01753	3	1,373	10.37 *
Stope Differences for Sex	2	5	.2264	.2102	.01616	1	1,373	28.69 *
Slope Differences for Ethnicity	2	6	.2264	.2247	.00166	2	1,373	1.47
Biology I - II 1985 - 1986 S	opt:omor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	. 2070	. 1924	.01464	1	335	6.18
Intercept Differences for Sex	8	9	. 1924	. 1348	.05755	1	336	23.94 **
Biology I - II 1985 - 1986 Soph	omore (	Ethnicity = Wh	ite, Blac	k & Hispania)	(Sex not	tested	1)	
Slope Differences for Ethnicity	10	11	.1402	. 1375	.00271	2	333	0.52
Intercept Differences for Ethnicity	11	12	. 1375	. 1348	.00261	2	335	0.51

<u>Table D-2</u>. (Continued)

Slope Differences for Ethnicity 10 11 .1957 .1915 .00425 1 401 2.12		Co	mparison		R <sup>2</sup>				
3-wsy Interaction Test (ASVAB*aex*ethnicity) 1 2 .2260 .2260 .2260 .00001 1 379 0.00 0.53 stope 1 interaction Test 2 3 3 .2260 .2269 .0014 1 379 0.00 0.53 stope Differences for Sex 7 8 .2102 .2068 .00343 1 401 1.74 Intercept Differences for Sex 8 9 .2068 .1788 .03000 1 402 15.21 1000 1 1 1.957 .1915 .0025 1 401 2.12 Intercept Differences for Ethnicity 10 11 12 .1915 .1768 .01469 1 402 7.30 1 402 15.21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Sax & Ethnicity Interaction Test	Biology I - II 1984 -	1985 Ju	nior (Ethnicii	ty = White	e & Nonwhite)				
Stope Differences for Sex	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2260	.2260	.00001	1	397	0.00
Intercept Differences for Sex	Sex & Ethnicity Interaction Test	2	3	.2260	.2249	.00104	1	398	0.53
Slope Differences for Ethnicity	Slope Differences for Sex	7	8	.2102	.2068	.00343	1	401	1.74
Sicropy   -	Intercept Differences for Sex	8	9	.2068	.1768	.03000	1		
Biology I - II 1985 - 1986 Junior (Ethnicity not tested)		10	•	•			1		
Slope Differences for Sex	Intercept Differences for Ethnicity	11	12	.1915	.1768	.01469	1	402	7.30 *
Biology I - 1I 1984 - 1985 Senior (Ethnicity not tested)   Slope Differences for Sex	Biology I - II 1985 - 1986	Junior	(Ethnicity not	t tested)					i
Biology I - II 1984 - 1985 Senior (Ethnicity not tested)	Slope Differences for Sex	7	8	.3612	.3377	.02346	1	147	5.40
Slope Differences for Sex	Intercept Differences for Sex	8	9	.3377	.3044	.03334	1	148	7.45 *
Biology I - II 1984 - 1985 Senior (Ethnicity = White & Black) (Sex not tested)	Biology I - II 1984 - 1985	Senior	(Ethnicity not	t tested)					
Biology   -	Slope Differences for Sex	7	8	.3372	.3354	.00184	1	195	0.54
Slope Differences for Ethnicity	Intercept Differences for Sex	8	9	.3354	.2998	.03552	1	196	10.47
Chemistry I - II 1985 - 1986 Freshmen (Ethnicity not tested)   Slope Differences for Sex   7	Biology I - II 1984 - 19	85 Senio	r (Ethnicity =	White & I	Black) (Sex no	t tested)			
Chemistry I - II 1985 - 1986 Freshmen (Ethnicity not tested) Slope Differences for Sex 7 8 .1195 .1189 .00061 1 128 0.09 Intercept Differences for Sex 8 9 .1189 .0940 .02490 1 129 3.65 Chemistry I - II 1984 - 1985 Sophomore (Ethnicity not tested) Slope Differences for Sex 7 8 .0789 .0614 .01752 1 168 3.20 Intercept Differences for Sex 8 9 .0614 .0373 .02410 1 169 4.34  Chemistry I - II 1985 - 1986 Sophomore (Ethnicity not tested) Slope Differences for Sex 7 8 .1055 .0967 .00878 1 430 4.22 Intercept Differences for Sex 8 9 .0967 .0537 .04306 1 431 20.55  Chemistry I - II 1984 - 1985 Junior (Ethnicity not tested) Slope Differences for Sex 7 8 .1423 .1412 .00104 1 426 0.52 Intercept Differences for Sex 8 9 .1412 .1015 .03975 1 427 19.76  Chemistry I - II 1984 - 1985 Junior (Ethnicity = White & Norwhite) (Sex not tested) Slope Differences for Ethnicity 10 11 .1299 .1225 .00739 1 426 Intercept Differences for Ethnicity 11 12 .1225 .1015 .02099 1 427 10.21  Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Norwhite) (Sex not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested) Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Norwhite) (Sex not tested) Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Slope Differences for Ethnicity	10	11	.3624	.3606	.00186	1	176	0.51
Stope Differences for Sex	Intercept Differences for Ethnicity	11	12	.3606	.3293	.03129	1	177	8.66
Chemistry I - II 1984 - 1985 Sophomore (Ethnicity not tested)	Chemistry I - 11 1985 - 1986	Freshmer	n (Ethnicity r	not tested	i)				
Chemistry I - II 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .0789 .0614 .01752 1 168 3.20 Intercept Differences for Sex 8 9 .0614 .0373 .02410 1 169 4.34   Chemistry I - II 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1055 .0967 .00878 1 430 4.22 Intercept Differences for Sex 8 9 .0967 .0537 .04306 1 431 20.55   Chemistry I - II 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1423 .1412 .00104 1 426 0.52 Intercept Differences for Sex 8 9 .1412 .1015 .03975 1 427 19.76   Chemistry I - II 1984 - 1985 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 12 .1225 .1015 .02099 1 427 10.21   Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested)  Since Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93  Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08   Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08   Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Slope Differences for Sex	7	8	.1195	.1189	.00061	1	128	0.09
Slope Differences for Sex   7	Intercept Differences for Sex	8	9	.1189	.0940	.02490	1	129	3.65
Chemistry I - II 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1055 .0967 .00878 1 430 4.22 Intercept Differences for Sex 8 9 .0967 .0537 .04306 1 431 20.55  Chemistry I - II 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1423 .1412 .00104 1 426 0.52 Intercept Differences for Sex 8 9 .1412 .1015 .03975 1 427 19.76  Chemistry I - II 1984 - 1985 Junior (Ethnicity = White & Norwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1299 .1225 .00739 1 426 Intercept Differences for Ethnicity 11 12 .1225 .1015 .02099 1 427 10.21  Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested)  Scape Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93 Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Norwhite) (Sex not tested)  Slope Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93 Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Norwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Chemistry I - II 1984 - 1985	Sophomore	E (Ethnicity r	not tested	<del>1</del> )				
Chemistry I - II 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1055 .0967 .00878 1 430 4.22 Intercept Differences for Sex 8 9 .0967 .0537 .04306 1 431 20.55  Chemistry I - II 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1423 .1412 .00104 1 426 0.52 Intercept Differences for Sex 8 9 .1412 .1015 .03975 1 427 19.76  Chemistry I - II 1984 - 1985 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1299 .1225 .00739 1 426  Intercept Differences for Ethnicity 11 12 .1225 .1015 .02099 1 427 10.21  Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested)  Scripe Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93  Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Slope Differences for Sex	7	8	.0789	.0614	.01752	1	168	3.20
Stope Differences for Sex   7	Intercept Differences for Sex	8	9	.0614	.0373	.02410	1	169	4.34
Chemistry I - II 1984 - 1985 Junior (Ethnicity not tested)   Slope Differences for Sex   7	Chemistry I - II 1985 - 1986	Sophomore	e (Ethnicity r	ot tested	i)				
Chemistry I - 11 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1423 .1412 .00104 1 426 0.52 Intercept Differences for Sex 8 9 .1412 .1015 .03975 1 427 19.76  Chemistry I - 11 1984 - 1985 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1299 .1225 .00739 1 426 Intercept Differences for Ethnicity 11 12 .1225 .1015 .02099 1 427 10.21  Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested)  Since Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93 Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Slope Differences for Sex	7	8	.1055	.0967	.00878	1	430	4.22
Slope Differences for Sex   7	Intercept Differences for Sex	8	9	.0967	.0537	.04306	1	431	20.55
Chemistry I - II 1984 - 1985 Junior (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity	Chemistry I - 11 1984 - 198	5 Junior	(Ethnicity no	t tested)	•				
Chemistry I - II 1984 - 1985 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1299 .1225 .00739 1 426  Intercept Differences for Ethnicity 11 12 .1225 .1015 .02099 1 427 10.21  Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested)  Scape Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93  Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Slope Differences for Sex	7	8	.1423	.1412	.00104	1	426	0.52
Slope Differences for Ethnicity   10	Intercept Differences for Sex	8	9	.1412	.1015	.03975	1	427	19.76
Intercept Differences for Ethnicity 11 12 .1225 .1015 .02099 1 427 10.21  Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested)  Scape Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93  Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Chemistry I - II 1984 - 19	85 Junior	(Ethnicity =	White & N	lonwhite) (Sex	not teste	d)		
Chemistry I - II 1985 - 1986 Junior (Ethnicity not tested)  Sinpe Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93  Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Slope Differences for Ethnicity		10 11		1299 .12	25 .00	739	1	426
Stape Differences for Sex 7 8 .1172 .1112 .00597 1 137 0.93 Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested) Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Intercept Differences for Ethnicity	11	12	.1225	.1015	.02099	1	427	10.21
Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Chemistry I - II 1985 - 198	6 Junior	(Ethnicity no	t tested)					
Intercept Differences for Sex 8 9 .1112 .0592 .05203 1 138 8.08  Chemistry I - II 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63			-			.00597	1	137	0.93
Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Intercept Differences for Sex	8	9	.1112	.0592		1		
Slope Differences for Ethnicity 10 11 .0790 .0680 .01097 1 137 1.63	Chemistry I - II 1985 - 19	86 Junior	(Ethnicity =	White & N	lonwhite) (Sex	not tested	d)		
Intercept Differences for Ethnicity 11 12 .0680 .0592 .00883 1 138 1.31								137	1.63
	Intercept Differences for Ethnicity	11	12	.0680	.0592	.00883	1	138	1.31

<u>Table D-2</u>. (Continued)

	Cor	parison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Chemistry I - II 1984 - 198	5 Senior	(Ethnicity n	ot tested	 )		· \	<del></del> _	
Slope Differences for Sex	7	8	. 1338	.1337	.00002	1	156	0.00
Intercept Differences for Sex	8	9	.1337	.1333	.00040	1	157	0.07
Chemistry I - II 1984 - 19	85 Senior	(Ethnicity =	White & !	Nonwhite) (Se	not teste	ed)		
Slope Differences for Ethnicity	10	11	.1556	.1357	.01993	1	156	3.68
Intercept Differences for Ethnicity	11	12	.1357	.1333	.00235	1	157	0.43
Physics 1 - II 1985 - 1986	Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.0768	.0729	.00392	1	232	0.99
Intercept Differences for Sex	8	9	.0729	.0412	.03174	1	233	7.98 1
Physics I - II 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1540	. 1538	.00023	1	166	0.04
Intercept Differences for Sex	8	9	.1538	.1154	.03842	1	167	7.58 *
Government & Civics 1984 - 19	185 Freshm	en (Ethnicit	y not test	ted)				
Slope Differences for Sex	7	8	.2359	.2339	.00209	1	344	0.94
Intercept Differences for Sex	8	9	.2339	.2219	.01190	1	345	5.36
Government & Civics 1984 - 198	5 Sophomo	re (Ethnicity	y not test	ted)				
Slope Differences for Sex	. 7	8	.1611	.1401	.02101	1	155	3.88
Intercept Differences for Sex	8	9	.1400	.1107	.02931	1	156	5.32
Government & Civics 1985 - 198	6 Sophomo	re (Ethnicity	not test	ted)				
Slope Differences for Sex	7	8	.1538	.1408	.01304	1	417	6.43
Intercept Differences for Sex	8	9	.1408	.1101	.03068	1	418	14.92 *
Government & Civics 1985 - 19	86 Sophom	ore (Ethnicity	/ = White	& Hispanic) (	Sex not te	sted)		
Slope Differences for Ethnicity	10	11	.1379	.1364	.00150	1	388	0.67
Intercept Differences for Ethnicity	11	12	.1364	.1179	.01847	1	389	8.32 *
Government & Civics 1984 - 19	85 Junior	(Ethnicity r	not tested	i)				
Slope Differences for Sex	7	8	.2310	.2289	.00216	1	456	1.28
Intercept Differences for Sex	8	9	.2289	.2117	.01715	1	457	10.16 *
Government & Civics 1984 - 1	985 Junio	r (Ethnicity =	: White &	Nonwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2140	.2135	.00046	1	456	0.26
Intercept Differences for Ethnicity	11	12	.2135	.2118	.00177	1	457	1.03
Government & Civics 198	5 - 1986	Junior (Ethni	city = Wh	ite & Black)				
-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2152	.2151	.00010	1	707	0.09
Sex & Ethnicity Interaction Test	2	3	.2151	.2151	.00000	1	708	0.00
Slope Differences for Sex	7	8	.2087	.2015	.00713	1	711	6.41
Intercept Differences for Sex	8	9	.2015	.1766	.02496	1	712	22.25 *
Slope Differences for Ethnicity	10	11	.1827	.1826	.00013	1	711	0.11
Intercept Differences for Ethnicity	11	12	.1826	.1766	.00603	1	712	5.25

Table D-2. (Continued)

	Cor	mparison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Government & Civics 198	4 - 1985	Senior (Ethn	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2339	.2336	.00028	1	602	0.22
Sex & Ethnicity Interaction Test	2	3	.2336	.2334	.00020	1	603	0.16
Slope Differences for Sex	7	8	.2188	.2181	.00075	1	606	0.58
Intercept Differences for Sex	8	9	.2181	.2081	.00994	1	607	7.72 *
Slope Differences for Ethnicity	10	11	.2242	.2202	.00407	1	606	3.18
Intercept Differences for Ethnicity	11	12	.2202	.2081	.01205	1	607	9.38 *
History 1984 - 1985	Freshmen	(Ethnicity	= White, I	Black & Hispar	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2711	.2696	.00146	2	1,319	1.32
Sex & Ethnicity Interaction Test	2	3	.2696	.2673	.00231	2	1,321	2.09
Slope Differences for Sex	7	8	.2601	.2596	.00057	1	1,327	1.01
Intercept Differences for Sex	8	9	.2596	.2285	.03106	1	1,328	55.71 *
Slope Differences for Ethnicity	10	11	.2411	.2348	.00628	2	1,325	5.48 *
Intercept Differences for Ethnicity	11	12	.2348	.2285	.00625	2	1,327	5.42 *
History 1985 - 1986	Freshmen	(Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2451	.2450	.00013	1	1,343	0.22
Sex & Ethnicity Interaction Test	2	3	.2450	.2445	.00041	1	1,344	0.74
Slope Differences for Sex	7	8	.2420	.2420	.00001	1	1,347	0.02
Intercept Differences for Sex	8	7	.2420	.2330	.00901	1	1,348	16.02 *
Slope Differences for Ethnicity	10	11	.2353	.2332	.00209	1	1,347	3.69
Intercept Differences for Ethnicity	11	12	.2332	.2330	.00020	1	1,348	0.34
History 1984 - 1985	Sophomor	e (Ethnicity	= White &	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2614	.2609	.00055	1	1,430	1.07
Sex & Ethnicity Interaction Test	2	3	.2609	.2585	.00238	1	1,431	4.61
Slope Differences for Sex	7	8	.2582	.2580	.00018	1	1,434	0.36
Intercept Differences for Sex	8	9	.2580	.2375	.02045	1	1,435	39.55 1
Slope Differences for Ethnicity	10	11	.2380	.2380	.00004	1	1,434	0.07
Intercept Differences for Ethnicity	11	12	.2380	.2375	.00045	1	1,435	0.86
History 1985 - 1986	Sophomor	e (Ethnicity	= White,	Black & Hispa	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2120	.2113	.00072	2	1,465	0.67
Sex & Ethnicity Interaction Test	2	3	.2113	.2061	.00522	2	1,467	4.86 1
Slope Differences for Sex	7	8	.1959	. 1939	.00200	1	1,473	3.66
Intercept Differences for Sex	8	9	.1939	. 1574	.03653	1	1,474	66.80 1
Slope Differences for Ethnicity	10	11	.1709	.1626	.00838	2	1,471	7.43 1
History 1984 - 198	35 Junior	(Ethnicity:	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2814	.2812	.00018	1	1,102	0.27
Sex & Ethnicity Interaction Test	2	3	.2812	.2799	.00133	1	1,103	2.04
Slope Differences for Sex	7	8	.2784	.2780	.00040	i	1,106	0.62
Intercept Differences for Sex	8	9	.2780	.2490	.02903	1	1,107	44.50
Slope Differences for Ethnicity	10	11	.2504	.2497	.00076	1	1,106	1.12
Intercept Differences for Ethnicity	11	12	.2497	.2490	.00072	1	1,107	1.06

<u>Table D-2</u>. (Continued)

	Co	mparison	1	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
History 1985 - 1986 Jun	ior (Etl	hnicity not tes	ted)				· <u></u>	
Slope Differences for Sex	7	8	.2165	.2113	.00520	1	428	2.84
Intercept Differences for Sex	8	9	.2113	.1779	.03342	1	429	18.18 *
History 1985 - 1986	Junior (I	Ethnicity = Whit	te & Blac	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1758	.1757	.00019	1	409	0.10
Intercept Differences for Ethnicity	11	12	.1757	.1750	.00069	1	410	0.34
History 1984 - 1985 Sen	ior (Etl	nnicity not test	ted)					
Slope Differences for Sex	7	8	.2778	.2758	.00206	1	423	1.21
Intercept Differences for Sex	8	9	.2758	.2689	.00683	1	424	4.00
History 1984 - 1985 :	Senior (8	thnicity = Whit	te & Blac	k) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.3128	.3111	.00163	1	402	0.96
Intercept Differences for Ethnicity	11	12	.3111	.2852	.02598	1	403	15.20
Foreign Language 1984 - 1985	Freshmer	n (Ethnicity no	t tested	<b>3</b> )				
Slope Differences for Sex	7	8	.2061	.2054	.00070	1	1,012	0.89
Intercept Differences for Sex	8	9	.2054	.1512	.05419	1	1,013	69.09 1
Foreign Language 1984 - 1985 Fro	eshmen (8	thnicity = Whit	te, Black	(& Hispanic)	(Sex not t	ested	)	
Slope Differences for Ethnicity	10	11	.1762	.1718	.00444	2	1,010	2.72
Intercept Differences for Ethnicity	11	12	.1718	.1512	.02054	2	1,012	12.55 *
Foreign Language 1985 - 1986	Freshmer	(Ethnicity no	t tested	1)				
Slope Differences for Sex	7	8	.1594	.1517	.00771	1	797	7.31 *
Foreign Language 1985 - 1986 Fre	eshmen (E	thnicity = <b>W</b> hit	e, Black	& Hispanic)	(Sex not t	ested)	<b>)</b>	
Slope Differences for Ethnicity	10	11	.1247	.1140	.01067	2	795	4.85 *
Foreign Language 1984 - 1985 s	Sophomore	Ethnicity no	t tested	1)				
Slope Differences for Sex	7	8	.1691	.1660	.00308	1	892	3.30
Intercept Differences for Sex	8	9	.1660	.0856	.08040	1	893	86.09 *
Foreign Language 1984 - 1985 Sop	ohomore (	Ethnicity = Whi	te, Blac	k & Hispanic	) (Sex not	teste	d) .	
Slope Differences for Ethnicity	10	11	.0988	.0953	.00350	2	890	1.73
Intercept Differences for Ethnicity	11	12	.0953	.0856	.00972	2	892	4.79 *
Foreign Language 1985 -	1986 Sop	homore (Ethnic	ity = Wh	ite & Nonwhii	te)			
S-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1324	.1319	.00054	1	604	0.37
Sex & Ethnicity Interaction Test	2	3	.1319	.1312	.00064	1	605	0.44
Slope Differences for Sex	7	8	.1205	.1163	.00416	1	608	2.87
Intercept Differences for Sex	8	9	.1163	.0634	.05290	1	609	36.46 *
Slope Differences for Ethnicity	10	11	.0744	.0735	.00091	1	608	0.60
Intercept Differences for Ethnicity	11	12	.0735	.0634	.01006	1	609	6.61
Foreign Language 1984 - 1985	Junior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1599	.1587	.00123	1	480	0.71
Intercept Differences for Sex	8	9	.1587	.0895	.06919	1	481	39.56 **

<u>Table D-2</u>. (Continued)

	Co	mparison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Foreign Language 1984 -	1985 Junior (E	thnicity = Whit	te, Black	& Hispanic)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	.1139	.1119	.00202	2	478	0.54
Intercept Differences for Ethnicity	11	12	.1119	.0895	.02242	2	480	6.06 *
Foreign Language 1985	- 1986 Junior	(Ethnicity no	t tested	<b>)</b>				
Slope Differences for Sex	7	8	.1573	.1515	.00578	1	247	1.70
Intercept Differences for Sex	8	9	.1515	.1136	.03787	1	248	11.07 *
Foreign Language 198	5 - 1986 Junio	r (Ethnicity =	White & I	Hispanic) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.0971	.0747	.02242	1	205	5.09
Intercept Differences for Ethnicity	11	12	.0746	.0728	.00184	1	206	0.41
Foreign Language 1984	- 1985 Senior	(Ethnicity no	t tested	)				
Slope Differences for Sex	7	8	.1201	.1175	.00262	1	224	0.67
Intercept Differences for Sex	8	9	.1175	.1037	.01384	1	225	3.53
Foreign Language 198	4 - 1985 Senio	r (Ethnicity =	White & I	Hispanic) (S	ex not test	ed)		
Slope Differences for Ethnicity	10	11	.0598	.0536	.00626	1	185	1.23
Intercept Differences for Ethnicity	11	12	.0536	.0510	.00260	1	186	0.51
Secretary & Office Education	on 1985 - 1986	Junior (Ethnic	ity = Whi	ite & Nonwhit	e) (Sex not	teste	d)	
Slope Differences for Ethnicity	10	11	.0861	.0861	.00003	1	215	0.01
Intercept Differences for Ethnicity	11	12	.0861	.0857	.00041	1	216	0.10
Secretary & Office Education	on 1984 - 1985	Senior (Ethnic	ity = Whi	ite & Nonwhit	e) (Sex not	teste	d)	
Slope Differences for Ethnicity	10	11	.0952	.0908	.00438	1	220	1.07
Intercept Differences for Ethnicity	11	12	.0908	.0832	.00766	1	221	1.86
Typing & Word Processing 1	984 - 1985 Fres	shmen (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	.2200	.2200	.00005	1	507	0.03
Intercept Differences for Sex	8	9	.2200	.2094	.01055	1	508	6.87 *
Typing & Word Processing	1984-1985 Fres	shmen (Ethnicit	y = White	e, Black & Hi	spanic) (Se	x not	tested)	
Slope Differences for Ethnicity	10	11	.2155	.2112	.00413	2	505	1.39
Intercept Differences for Ethnicity	11	12	.2112	.2094	.00176	2	507	0.56
Typing & Word Processing 1	985 - 1986 Fres	shmen (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	.1369	.1350	.00183	1	492	1.04
Intercept Differences for Sex	8	9	.1350	.1096	.02548	1	493	14.52 **
Typing & Word Processing	1985-1986 Fres	shmen (Ethnicit	y = White	e & Hispanic)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	.1038	.1038	.00001	1	445	0.00
intercept Differences for Ethnicity	11	12	.1038	.0970	.00676	1	446	3.36
Typing & Word Processing 198	84 - 1985 Sopho	omore (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	.1595	.1591	.00041	1	631	0.31
Intercept Differences for Sex	8	9	.1591	.1215	.03759	1	632	28.25 **

Table D-2. (Continued)

	Con	parison	1	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Typing & Word Processing 1984	-1985 Sopho	more (Ethnici	ty = White	e, Black & His	spanic) (Se	x not	tested)	
Slope Differences for Ethnicity	10	11 `	.1247	.1228	.00187	2	629	0.67
Intercept Differences for Ethnicity	11	12	.1228	.1215	.00130	2	631	0.47
Typing & Word Processing 1985 -	1986 Sopho	more (Ethnic	ity not te	ested)				
Slope Differences for Sex	7	8	.1279	.1185	.00941	1	405	4.37
Intercept Differences for Sex	8	9	.1185	.1105	.00795	1	406	3.66
Typing & Word Processing 1985	-1986 Sopho	more (Ethnici	ty = White	e & Black) (Se	ex not test	ed)		
Slope Differences for Ethnicity	10	11	.1090	.1089	.00014	1	374	0.06
Intercept Differences for Ethnicity	11	12	.1089	.1063	.00260	1	375	1.09
Typing & Word Processing 1984	- 1985 Jun	ior (Ethnici	ty not tes	sted)				
Slope Differences for Sex	7	8	.1832	.1830	.00024	1	391	0.12
intercept Differences for Sex	8	9	.1830	.1191	.06392	1	392	30.67 **
Typing & Word Processing 19	84-1985 Jun	ior (Ethnicity	y = White	& Black) (Sex	not teste	d)		
lope Differences for Ethnicity	10	11	.1372	.1367	.00045	1	359	0.19
ntercept Differences for Ethnicity	11	12	.1367	.1304	.00638	1	360	2.66
Typing & Word Processing 1985	- 1986 Jun	ior (Ethnicii	ty not tes	sted)				
Slope Differences for Sex	7	8	.1130	.1114	.00154	1	221	0.38
Intercept Differences for Sex	8	9	.1114	.0721	.03936	1	222	9.83 *
Typing & Word Processing 198	85-1986 Jun	ior (Ethnicity	/ = White	& Nonwhite) (	Sex not te	sted)		
Slope Differences for Ethnicity	10	11	.0965	.0875	.00898	1	221	2.20
Intercept Differences for Ethnicity	11	12	.0875	.0721	.01540	1	222	3.75
Typing & Word Processing 1984	- 1985 Sen	ior (Ethnicii	ty not tes	ited)				
Slope Differences for Sex	7	8	. 1834	.1767	.00669	1	216	1.77
ntercept Differences for Sex	8	9	.1767	.1505	.02619	1	217	6.90 *
Accounting/Bookkeeping 1985 -	1986 Sopho	more (Ethnici	ity not te	ested)				
lope Differences for Sex	7	8	.1834	.1802	.00330	1	311	1.26
Intercept Differences for Sex	8	9	.1802	.1342	.04591	1	312	17.47 **
Accounting/Bookkeeping 1984	- 1985 Juni	or (Ethnicity	not test	:ed)				
Slope Differences for Sex	7	8	.2596	.2566	.00296	1	239	0.96
Intercept Differences for Sex	8	9	.2566	.1717	.08476	1	240	27.37 **
Accounting, Bookkeeping 1985	- 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.0972	.0947	.00254	1	185	0.52
Intercept Differences for Sex	8	9	, no ;7	.0610	03368	1	186	6.92 *
Accounting/Bookkeeping 1984	- 1985 Seni	or (Ethnicity	not test	ed)				
		-						
Slope Differences for Sex	7	8	.1419	.1387	.00323	1	247	0.93

<u>Table D-2</u>. (Continued)

		Cor	mparison	<u> </u>	2	··· ··· ··-			
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
н	ome Economics 1984 - 1985	Freshmen	(Ethnicity n	ot tested	 )				
Slope Differences for	Sex	7	8	.2222	.2222	.00000	1	547	0.00
Intercept Differences	for Sex	8	9	.2222	.1767	.04551	1	548	32.06
	Home Economics 1984-1985	Freshmen	(Ethnicity = 1	hite & Bl	lack) (Sex not	t tested)			
Slope Differences for	Ethnicity	10	11	.2368	.2361	.00062	1	519	0.42
Intercept Differences	for Ethnicity	11	12	.2361	.1638	.07231	1	520	49.23*
H	ome Economics 1985 - 1986	Freshmen	(Ethnicity no	ot tested)	)				
Slope Differences for	Sex	7	8	.1797	.1796	.00006	1	312	0.02
Intercept Differences	for Sex	8	9	.1796	.1139	.06573	1	313	25.08
	Home Economics 1985-1986	Freshmen	(Ethnicity = 1	hite & No	onwhite) (Sex	not tested	I)		
Slope Differences for	Ethnicity	10	11	.1168	.1165	.00027	1	312	0.10
Intercept Differences	for Ethnicity	11	12	.1165	.1139	.00256	1	313	0.91
He	ome Economics 1984 - 1985	Sophomore	(Ethnicity r	not tested	1)				
Slope Differences for		7	8	.1649	.1638	.00109	1	321	0.42
Intercept Differences	for Sex	8	9	.1638	.1054	.05849	1	322	22.52
,	iome Economics 1984-1985 S	ophomore	(Ethnicity = W	hite & No	nwhite) (Sex	not tested	l)		
Slope Differences for		10	11	.1554	.1392	.01619	1	321	6.15
Intercept Differences	for Ethnicity	11	12	. 1392	.1054	.03382	1	322	12.65*
Н	ome Economics 1985 - 1986	Sophomore	(Ethnicity n	ot tested	<b>()</b>				
Slope Differences for	Sex	7	8	.1758	.1757	.00011	1	394	0.05
Intercept Differences	for Sex	8	9	.1757	.1113	.06436	1	395	30.84
•	lome Economics 1985-1986 S	ophomore	(Ethnicity = W	hite & No	nwhite) (Sex	not tested	)		
Slope Differences for	Ethnicity	10	11	.1166	.1119	.00472	1	394	2.11
Intercept Differences	for Ethnicity	11	12	.1119	.1113	.00056	1	395	0.25
H	Home Economics 1984 - 1985	Junior	(Ethnicity not	tested)					
Slope Differences for	Sex	7	8	.1407	.1388	.00194	1	279	0.63
Intercept Differences	for Sex	8	9	.1388	.1107	.02811	1	280	9.14
	Home Economics 1984-1985	Junior (E	thnicity ≈ Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for	Ethnicity	10	11	.1132	.1130	.00022	1	279	0.07
Intercept Differences	for Ethnicity	11	12	.1130	.1107	.00237	1	280	0.75
ŀ	Home Economics 1985 - 1986	Junior	(Ethnicity not	tested)					
Slope Differences for	Sex	7	3	.1586	.1578	.00071	1	358	0.30
Interneot Differences	for Sex	8	è.	.1579	.0544	.10345	1	359	44.10
	Home Economics 1985-1986	Junior (E	thnicity = Whi	te & Nonwi	hite) (Sex no	t tested)			
Slope Differences for		10	11	.0638	.0576	.00616	1	358	2.36
Intercept Differences	for Ethnicity	11	12	.0576	.0544	.00323	1	359	1.23

Table D-2. (Concluded)

	Cor	mparison	R <sup>2</sup>					
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1984 - 19	985 Senior	(Ethnicity no	t tested)					•
Slope Differences for Sex	7	8	.1133	.1119	.00140	1	318	0.50
Intercept Differences for Sex	8	9	.1119	.0738	.03816	1	319	13.71 **
Home Economics 1984-1	985 Senior	(Ethnicity = W	hite & No	nwhite) (Sex i	not tested)	<b>)</b>		
Slope Differences for Ethnicity	10	11	.0769	. 0745	.00239	1	318	0.82
Intercept Differences for Ethnicity	11	12	.0745	.0738	.00077	1	319	0.26
Computer Programming 1985 -	1986 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.1820	.1807	.00128	1	227	0.35
Intercept Differences for Sex	8	9	.1807	.1041	.07656	1	228	21.31 **
Computer Programming 1984	- 1985 Juni	or (Ethnicity	not test	ed)				
Slupe Differences for Sex	7	8	. 1301	. 1294	.00071	1	240	0.20
Intercept Differences for Sex	8	9	. 1294	.:117	.01774	1	241	4.91
Computer Programming 1985	- 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2440	.2440	.00001	1	157	0.00
Intercept Differences for Sex	8	9	.2440	.1442	.09980	1	158	20.86 **
Computer Programming 1934	- 1985 Seni	or (Ethnicity	not test	ed)				
Slope Differences for Snx	7	8	. 1248	. 1211	.00370	1	152	0.64
Intercept Differences for Sex	8	9	. 1212	. 1197.	.00191	1	153	0.33

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

Table D-3. F-Tests of Significance for Math Composite

	Con	nparison	R	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
English I · IV 1984 -	1985 Fres	shmen (Ethnici	ty = Whit	e, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2449	.2445	.00041	2	2,422	0.66
Sex & Ethnicity Interaction Test	2	3	.2445	.2404	.00418	2	2,424	6.70 *
Slope Differences for Sex	7	8	. 2394	.2386	.00078	1	2,430	2.49
Intercept Differences for Sex	8	9	. 2386	. 1955	.64307	1	2,431	137.52 **
Slope Differences for Ethnicity	10	11	. 1969	.1961	.00081	2	2,428	1.23
Intercept Differences for Ethnicity	11	12	. 1961	. 1955	.00059	2	2,430	0.89
English I - IV 1985 -	1986 Fre	shmen (Ethnici	ty = Whit	e, Black & F	lispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1996	. 1970	.00268	2	1,989	3.33
Sex & Ethnicity Interaction Test	2	3	. 1970	. 1944	.00257	2	1,991	3.19
Slope Di ferences for Sex	7	8	.1829	.1822	.00067	1	1,997	1.65
Intercept Differences for Sex	8	9	.1822	. 1498	.03244	1	1,998	79.25 **
Slope Differences for Ethnicity	10	11	. 1579	.1557	.00225	2	1,995	2.66
Intercept Differences for Ethnicity	11	12	. 1557	. 1498	.00587	2	1,997	6.95 *
English I - IV 1984 -	1985 Soph	omore (Ethnic	ity = Whi	te, Black & F	(ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2615	.2608	.00065	2	2,296	1.01
Sex & Ethnicity Interaction Test	2	3	.2608	.2601	.00070	2	2,298	1.09
Stope Differences for Sex	7	8	. 2555	. 2517	.00379	1	2,304	11 73 **
Slope Differences for Ethnicity	10	11	.2067	.2060	.00062	2	2,302	0.89
Intercept Differences for Ethnicity	11	12	.2060	.2019	.00415	2	2,304	6.03 *
English I - IV 1985 -	1986 Soph	omore (Ethnic	ity = Whi	te, Black & I	lispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2321	.2309	.00122	2	1,942	1.54
Sex & Ethnicity Interaction Test	2	3	. 2309	. 2306	.00032	2.	1,944	0.40
Slope Differences for Sex	7	8	.2159	.2123	.00365	1	1,950	9.07 *
Intercept Differences for Sex	8	9	.2123	.1565	.05578	1	1,951	138.16 **
Slope Differences for Ethnicity	10	11	.1711	.1709	.00019	2	1,948	0.23
Intercept Differences for Ethnicity	11	12	.1709	.1565	.01440	2	1,950	16.94 **
English I - IV 1984	- 1985 Ju	nior (Ethnici	ty = Whit	e, Black & H	ispanic)			
3-way Interaction Test (ASVAR*sex*ethnicity)	1	2	.2457	.2455	.00018	2	1,721	0.21
Sex & Ethnicity Interaction fest	2	3	. 2455	.2453	.00017	2	1,723	0.19
Slope Differences for Sex	7	8	.2390	.2347	.00428	1	1,729	9.73 *
Intercept Differences for Sex	8	9	. 2347	.1574	.07725	1	1,730	174.63 **
Slope Differences for Ethnicity	10	11	. 1616	. 1600	.00151	2	1,727	1.55
Intercept Differences for Ethnicity	11	12	.1600	. 1575	.00259	2	1,729	2.67
English 1 - IV 1985	- 1986 Ju	nior (Ethnici	ty = Whit	e, Black & н	ispanic)			
3-way Interaction Test (ASVA6*sex*ethnicity)	1	2	.2161	.2160	.00015	1	1,258	0.24
Sex & Ethnicity Interaction Test	2	3	.2160	.2158	.00016	1	1,259	0.25
Slope Differences for Sex	7	8	.2146	.2102	.00441	1	1,262	7.09 *
Intercept Differences for Sex	8	ý	.2102	.1282	.08204	1	1,263	
Slope Differences for Ethnicity	10	11	. 1290	.1290	.00001	1	1,262	0.01
Intercept Differences for Ethnicity	11	12	. 1290	.1281	.07084	1	1,263	1.25

	Com	parison		<sub>P</sub> 2				
F-Test Comparison	Full	Restric	ted Full	Restricted	R <sup>2</sup> Change	af 1	df2	F
English 1 - 1V 1984	- 1985 Sen	ior (Eth	nnicity = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2172	.2157	.00150	2	1,275	1.22
Sex & Ethnicity Interaction Test	2	3	.2157	.2149	.00079	2	1,277	0.65
Stope Differences for Sex	7	8	. 2072	.2054	.00180	1	1,283	2.91
Intercept Differences for Sex	8	9	. 2054	. 1751	.03039	1	1,284	49.11 **
Slope Differences for Ethnicity	10	11	. 1804	. 1764	.00394	2	1,281	3.08
Intercept Differences for Ethnicity	11	12	. 1764	.1751	.00138	5	1,283	1.08
General Math 1984 -	1985 Fresh	men (Etl	inicity = Whit	e, Black & Ki	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0920	.0888	.00321	2	1,167	2.06
Sex & Ethnicity Interaction Test	2	3	.0888	.0852	.00365	2	1,169	2.34
Slope Differences for Sex	7	8	.0826	.0811	.00155	1	1,175	1.99
Intercept Differences for Sex	8	9	.0811	.0728	.00823	1	1,176	10.53 *
Slope Differences for Ethnicity	10	11	.0753	.0747	.00064	2	1,173	0.41
Intercept Differences for Ethnicity	11	12	.0747	.0728	.00185	2	1,175	1.18
General Math 1985 -	1986 Fresh	men (Eti	nnicity = Whit	e & Black)				
3-way Interaction Test (ASVAO*sex*ethnicity)	1	2	. 0369	.0367	.00025	1	549	0.14
Sex & Ethnicity Interaction Test	2	3	.0367	.0334	.00327	1	550	1.87
Slope Differences for Sex	7	8	.0292	.0276	.00165	1	553	U.94
Intercept Differences for Sex	c	?	.0276	.0219	.00563	1	554	3.21
Slope Differences for Ethnicity	10	11	.0267	.0223	.00444	1	553	2.52
Intercept Differences for Ethnicity	11	12	. 0223	.0219	.00 <b>035</b>	1	554	0.20
General Math 1984 -	19 <b>85</b> Sopho	more (E	thnicity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0918	. 0892	.00260	2	736	1.05
Sex & Ethnicity Interaction Test	2	3	.0892	.0843	.00492	2	738	2.00
Slope Differences for Sex	7	8	.0791	.0783	.00080	1	744	0.64
Intercept Differences for Sex	8	9	. 9784	.0740	.00433	1	745	3.50
Slope Differences for Ethnicity	10	11	.0796	.0789	.00075	2	742	0.30
Intercept Differences for Ethnicity	11	12	.0789	.0740	.00486	2	744	1.96
General Math 1985 -	1986 Sopho	more (E	thnicity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1202	.1144	.00587	1	305	2.04
Sex & Ethnicity Interaction Test	2	3	.1144	.1121	.00230	1	306	G.79
Slope Differences for Sex	7	8	.0901	.0387	.00146	1	309	0.49
Intercept Differences for Sex	8	9	.0887	.0546	.03405	1	310	11.58
Slope Differences for Ethnicity	10	11	.0755	.0736	.00198	1	309	0.66
Intercept Differences for Ethnicity	11	12	.0 <i>7</i> 36	.0546	. 01893	1	310	6.33
General Math 1984 -	1985 Juni	or (Eth	nicity = White	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 0913	.0844	.00684	1	266	2.00
Sex & Ethnicity Interaction Test	2	3	.0844	.0844	.00006	1	267	0.62
Slope Differences for Sex	7	8	.0799	.0799	.00000	1	270	0.00
Intercept Differences for Sex	3	9	,0797	.0516	.02832	ì	271	8.34 •
Slope Differences for Ethnicity	10	11	.0562	.0538	.00245	1	270	0.70
Intercept Differences for Ethnicity	11	12	.0538	.0516	.60216	1	271	0.62

Table 0-3. (Continued)

	Co	omparison	<del>- · · · · · · ·</del>	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	af2	F
General Math 1985 - 1986	Junior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1271	.1267	.00045	1	222	0.11
Intercept Differences for Sex	8	9	.1267	.1037	.02297	1	223	5.86
General Math 1985 - 1986	Junior	(Ethnicity = W	hite & Bl	ack) (Sex not	test <b>e</b> d)			
Slope Differences for Ethnicity	10	11	. 1300	.1272	.00285	1	195	0.64
Intercept Differences for Ethnicity	11	12	.1272	.1227	.00449	1	196	1.01
General Math 1984 - 1985	Senior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1064	.1020	.00439	1	230	1.13
Intercept Differences for Sex	8	9	. 1020	.1015	.00055	1	231	0.14
General Math 1984 - 198	35 Senio	r (Ethnicity = 1	⊌hite & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	. 1508	. 1489	.00197	1	203	0.47
Intercept Differences for Ethnicity	11	12	. 1489	.1240	.02488	1	204	5.96
Algebra 1984 - 1989	Freshm	en (Ethnicity	= White &	Norwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2092	. 2070	.00215	1	1,189	3.21
Sex & Ethnicity Interaction Test	2	3	.2070	.2070	.00002	1	1,181	0.02
Slope Differences for Sex	7	8	.2036	.2024	.00112	1	1,184	1.67
Intercept Differences for Sex	ά	y	.2025	.1619	.04059	1	1,185	60.31 **
Slope Differences for Ethnicity	10	11	. 1683	. 1630	.00528	1	1,184	7.52 *
Intercept Differences for Ethnicity	11	12	. 1630	. 1619	.00112	1	1,185	1.58
Algebra 1985 - 1984	5 Freshm	en (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2320	.2317	.00037	1	708	0.34
Sex & Ethnicity Interaction Test	2	3	.2317	.2302	.00152	1	709	1.40
Slope Differences for Sex	7	8	.2202	. 2202	.00007	1	712	0.07
Intercept Differences for Sex	8	9	.2201	.1834	.03670	1	713	33.56 *1
Slope Differences for Ethnicity	10	11	.1921	. 1909	.00122	1	712	1.07
Intercept Differences for Ethnicity	11	12	.1909	. 1834	.00746	1	713	6.58
Algebra 1984 · 198	5 \$ophor	ore (Ethnicity	= Wnite	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1662	. 1659	.00032	1	871	0.34
Sex & Ethnicity Interaction Test	2	3	. 1659	.1611	.00479	1	872	5.01
Slope Differences for Sex	7	8	.1609	.1586	.00236	1	875	2.46
Intercept Differences for Sex	8	9	. 1586	.1351	.02345	1	876	24.41 **
Slope Differences for Ethnicity	10	11	. 1353	.1352	.00010	1	ز87	0.10
Intercept Differences for Ethnicity	11	12	. 1352	. 1351	.00005	1	876	0.03
<b>A</b> lgebra 1985 - 198	6 Sophor	ore (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	5	. 1925	. 1911	.00137	1	617	1.04
Ser & Ethnicity Interaction Test	?	3	. 1911	.1893	.60178	1	618	1.36
Stop: Differences for Sex	7	8	. 1825	.1802	.00222	1	621	1.68
Intercept Differences for Sex	8	9	.1803	. 1643	.01595	1	622	12.10 **
Slope Differences for Ethnicity	10	11	. 1688	. 1670	.00187	1	621	1.36
Intercept Differences for Ethnicity	11	12	.1670	. 1643	.00269	1	935	2.01

Table D-3. (Continued)

	Соп	parison		<sup>2</sup>				
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Algebra 1984 - 19	985 Junior	(Ethnicity :	- White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2343	.2342	.00016	1	489	0.11
Sex & Ethnicity Interaction Test	2	3	.2342	. 2339	.00022	1	490	0.14
Slope Differences for Sex	7	8	.2264	.2262	.00025	i	493	0.16
Intercept Differences for Sex	8	9	.2262	. 1915	.03468	1	494	22.14 **
Slope Differences for Ethnicity	10	11	. 1981	. 1955	.00265	1	493	1.63
Intercept Differences for Ethnicity	11	12	. 1955	. 1915	.00399	1	494	2.45
Algebra 1985 - 1986 Jun	nior (Eth	nicity not te	rted)					
Slope Differences for Sex	7	8	.1661	.1568	.00926	1	273	3.03
Intercept Differences for Sex	8	9	.1568	.1488	.00799	1	274	2.60
Algebra 1985 - 1986 Ju	unior (Eth	nicity = White	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1689	.1541	.01487	1	273	4.88
Intercept Differences for Ethnicity	11	12	. 1541	. 1489	.00523	1	274	1.69
Algebra 1984 - 1985 Sei	nios /E+h	micity not to	ctod)					
Slope Differences for Sex	7	8	.2602	.2431	.01711	1	265	6.13
Intercept Differences for Sex	8	9	.2431	.2046	.03857	1	266	13.56 *1
Atgebra 1984 - 1985 S		•					245	7.50
Slope Differences for Ethnicity	10	11	.2311	.2210	.01015	1	265	3.50
Intercept Differences for Ethnicity	11	12	.2210	.2046	.01642	1	266	5.61
Geometry 1985 - 1986 Fr	eshmen (E	thnicity not	tested)					
Slope Differences for Sex	7	8	.2664	.2663	.00004	1	511	0.03
Intercept Differences for Sex	8	9	.2664	.2585	.00784	1	512	5.47
Geometry 1985 - 1986 Freshi	men (Ethn	icity = Wnite,	Black &	Hispanic) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2637	.2613	.00244	2	509	0.84
Intercept Differences for Ethnicity	11	12	.2613	.2585	.00276	2	511	0.95
Geometry 1984 - 1985 Sop	homone ((	Ethnicity not	tested)					
Slepe Differences for Sex	7	8	.2732	. 2732	.00002	1	561	0.02
Intercept Differences for Sex	8	9	.2732	. 2623	.01093	1	562	8.45 *
Geometry 1934 - 1985 Sopho	soco (Eth	nicity = White	Black &	Hispanic) (S	er not tes	tod)		
Slope Differences for Ethnicity	10	11	.2673	.2626	.00474	2	559	1.81
Intercept Differences for Ethnicity	11	12	.7626	. 2622	.00033	2	561	0.12
<b>Geometry 1985 - 1986 Sop</b>	homore ()	Ethnicity not	testedl					
Stope Differences for Sex	no⊪ere (i 7	8	.2591	. 2578	.00135	1	410	0.75
Intercept Differences for Sex	8	9	.2578	.2400	.01778	1	411	9.85 *
( 100 to	Carbana - :	/ithereit: =	Uhien <sup>o</sup> m	Hacks 70	داد ده دیرو و			
Geometry 1985 - 1986 Slope Differences for Ethnicity	sspromore 10	11	white & 6	,2693 ,2693	.00861	1	371	4.43
stope of increases for Ethincity	10	1.1	.2117	, 2013	. COOKS I	,	.11	4.43

<u>Table D-3</u>. (Continued)

	Co	mparison						
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Geometry 1984 - 1985 Jun	nior (E	thnicity not to	ested)	<del></del>				
Slope Differences for Sex	7	8	.2529	.2517	.00114	1	305	0.46
Intercept Differences for Sex	8	9	.2517	.2340	.01768	1	306	7.23 *
Geometry 1984 - 1985 Ju	unior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.2350	. 2340	.00099	1	305	0.40
Intercept Differences for Ethnicity	11	12	.2341	.2340	.00001	1	306	0.00
Geometry 1985 - 1986 Jur	nior (E	tonicity not to	ested)					
Slope Differences for Sex	7	8	.3095	.3076	.00182	1	123	0.32
Intercept Differences for Sex	8	9	.3076	.2790	.02867	1	124	5.14
Geometry 1985 - 1986 Ju	unior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.4013	.3327	.06852	1	123	14.08 **
Geometry 1984 - 1985 Ser	nior (E	thnicity not t	ested)					
Slope Differences for Sex	7	8	.3047	.2775	.02713	1	107	4.17
Intercept Differences for Sex	8	ý	.2775	.2775	.00006	1	108	0.01
Geometry 1984 - 1985 Se	enior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	1Ú	11	.3072	.2943	.01291	i	107	1.99
Intercept Differences for Ethnicity	11	12	.2943	.2775	.01685	1	108	2.58
Calculus 1985 - 1986 Jur	nior (E	thnicity not t	ested)					
Stope Differences for Sex	7	8	. 1681	.1674	.00076	1	147	0.14
Intercept Differences for Sex	8	9	.1674	. 1660	.00133	1	148	0.24
General Science 1984 - 1	1985 fre	eshmen (Ethnic	ity ≃ ⊌hi	te, Black & H	ispanic)			
3-way Interaction [est (ASVAB*sex*ethnicity)	1	2	.2373	.2356	.00172	2	1,956	2.20
Sex & Ethnicity Interaction Test	2	3	.2356	. 2267	.00894	2	1,958	11.45 **
Consistent Over or Under prediction of Subgroup	2	4	.2356	.2348	.00079	3	1,958	0.68
General Science 1985 - 1986	Freshma	en (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.1014	. 1001	.00136	1	274	0.41
Intercept Differences for Sex	8	9	.1001	.0948	.00525	1	275	1.60
General Science 1985 - 19	86 Frest	nmen (Ethnicity	/ = White	& Black) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	.1280	.0972	.03078	1	240	8.47 *
General Science 1984 -	1985 Sai	chomore (Ethni	city = Wh	nice & Nonwhit	e)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2101	.2097	.00035	1	341	0.15
Sex & Ethnicity Interaction Test	2	3	.2097	. 1981	.61158	1	342	5.01
Slope Differences for Sex	7	8	. 1937	. 1910	.00270	1	345	1.15
Intercept Differences for Sex	8	9	.1910	. 1561	.03488	1	346	14.92 **
Slope Differences for Ethnicity	10	11	.1647	. 1632	.00150	1	345	0.62
Intercept Differences for Ethnicity	11	12	. 1632	. 1561	.00717	1	346	2.96

Table D-3. (Continued)

	Cor	nparison		ę <sup>2</sup>				
F-Test Comparison	Full	Restricted	Fult	Restricted	R <sup>2</sup> Change	dfı	afz	F
General Science 1985 - 1986	Sophomore	Ethnicity r	not tested	d)			- · · ·	
Slope Differences for Sex	7	8	.1235	.1207	.00277	1	183	0.58
Intercept Differences for Sex	8	9	. 1207	.0920	.02871	1	184	6.01
General Science 1985 - 198	6 Sophom	ore (Ethnicity	= White	& Black) (Sex	not tested	i)		
Slope Differences for Ethnicity	10	11	. 1688	. 1687	.00004	1	158	0.01
Intercept Differences for Ethnicity	11	12	. 1687	.1244	.04427	1	159	8.47 *
General Science 1984 - 1985	Junior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1029	. 0990	.00392	1	174	0.76
Intercept Differences for Sex	8	9	.0990	.0827	.01631	1	175	3.17
General Science 1984 · 1	985 Juni	or (Ethnicity:	= White &	Black) (Sex	not tested)	)		
Slope Differences for Ethnicity	10	11	.1479	.1457	.00216	1	149	0.38
Intercept Differences for Ethnicity	11	12	.1457	.0741	.07162	1	150	12.58 *
General Science 1985 - 1926	Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2030	. 2030	.00000	1	258	C.00
Intercept Differences for Sex	8	9	. 2030	.1871	.01591	1	259	5.17
ueneral ścience 1985 - 198	ió Junior	(Ethnicity = i	ánice à N	onwhile) (Sex	not tested	J)		
Slope Differences for Ethnicity	10	11	.1919	. 1919	.00001	1	258	0.00
Intercept Differences for Ethnicity	11	12	. 1919	.1871	.00475	1	259	1.52
General Science 1984 - 1985	Senior	(Ethnicity ro	t tested)					
Slope Differences for Sex	7	8	.0664	.0660	.00045	1	182	0.09
Intercept Differences for Sex	8	9	.0660	.0518	.01414	1	183	2.77
Biology I · II 1984 - 1985	Freshmen	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.2185	.2182	.00021	1	399	0.08
Intercept Differences for Sex	8	9	.2183	.2057	.01251	1	<b>3</b> 00	4.80
Biology 1 - 11 1984 - 1985	Freshme	n (Ethnicity =	White &	Nonwhite) (Se	x not teste	e <b>a</b> )		
Slope Differences for Ethnicity	10	11	.2151	.2075	.00754	1	299	2.87
Intercept Differences for Ethnicity	11	12	.2075	,2057	.60179	1	300	0.68
Biology 1 - 11 1985 -	1986 Fre	shmen (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	5	.1815	.1815	.00005	1	1,119	0.07
Sex & Ethnicity Interaction Test	2	3	.1815	. 1814	. 00005	1	1,120	0.06
Slope Differences for Sca	7	8	. 1805	. 1803	.00022	1	1,123	0.30
Intercept Differences for Sex	8	9	.1803	. 1524	.02790	1	1,124	38.26 *
Slope Differences for Ethnicity	10	11	.1533	. 1524	.00093	1	1,123	1.23
Intercept Differences for Ethnicity	11	12	.1524	. 1524	.00001	1	1,124	0.01

Table D-3. (Continued)

	Cor	mparison		1 <sup>2</sup>				
F-Test Comparison	full	Restricted	full	Restricted	R <sup>2</sup> Change	dfj	df2	F
Biology 1 - 11 1984 -	1985 Soph	omore (Ethnic	ity = Whit	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2493	.2465	.00277	2	1,371	2.53
Sex & Ethnicity Interaction Test	2	3	.2465	.2416	.00497	2	1,373	4.53
Slope Differences for Sex	7	8	.2311	.2284	.00270	1	1,379	4.84
Intercept Differences for Sex	8	9	.2284	.2104	.01804	1	1,380	32.26 **
Slope Differences for Ethnicity	10	11	.2199	.2183	.00153	2	1,377	1.35
Intercept Differences for Ethnicity	11	12	.2183	.2104	.00794	2	1,379	7.01 **
Biology 1 - II 1985 - 1986	Suphemor	e (Ethnicity (	not tested	d)				
Slope Differences for Sex	7	8	. 2542	.2503	.00389	1	335	1.75
Inte cept Differences for Sex	8	9	.2503	.2060	.04434	1	336	19.87 **
Biology I - II 1985 - 1986 So	phomore (	Ethnicity = Wh	ite, Black	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.2077	.2064	.00134	2	333	0.28
Intercept Differences for Ethnicity	11	12	. 2064	.2060	.00039	2	335	0.08
Biology 1 - 11 1984	- 1985 Ju	nior (Ethnici	ty = Whit	e & Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2540	.2517	.00222	1	397	1.18
Sex & Ethnicity Interaction Test	2	3	.2517	.2515	.00020	1	398	0.11
Slope Differences for Sex	7	8	.2477	.2395	.00817	1	401	4.36
Intercept Differences for Sex	8	ÿ	.2396	.2068	.03272	1	402	17.30 A
Slope Differences for Ethnicity	10	11	.2131	.2105	-00255	1	401	1.30
Intercept Differences for Ethnicity	11	12	.2105	.2063	.00370	1	402	1.89
Biology I - 11 1985 - 198	6 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.3448	.3138	-03104	1	147	6.97 *
Biology I - 11 1984 - 198	5 Senior	(Ethnicity rio	t tested)					
Slope Differences for Sex	7	8	.3263	.3212	.00503	1	195	1.46
Intercept Differences for Sex	8	9	.3212	.2977	.02355	1	196	<b>*</b> 03.3
<b>B</b> iology I - 11 1984 - 1	985 Senio	r (Ethnicity =	White &	Black) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.3653	. 3585	.00583	1	176	1.90
Intercept Differences for Ethnicity	11	12	.3585	. 2927	.06580	1	177	18.16 *
Chemistry I - 11 1985 - 198	6 Freshma	n (Ethnicity	not teste	ರ)				
Stope Differences for Sex	7	8	2640	. 2543	.00976	1	128	1.70
Intercept Differences for Sex	8	9	. 2543	. 2369	.01 <i>7</i> 38	1	129	3.01
Chemistry I - 11 1984 - 1985	Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	. 7	δ	.0815	.0779	.৫০ <b>3</b> 5२	1	158	0.66
Intercept Differences for Sex	8	9	,0779	.0564	.92156	1	169	3.95
Chemistry I - 1: 1985 - 1986	Sophonar	e (Ethn≔cit∨	nut teste	·d)				
Slope Differences for Sex	7	8	. 1575	. 1539	.00352	1	430	1.80

Table D-3. (Continued)

	Соп	parison	F	,2				<u>_</u>
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Chemistry I - II 1984 - 19	85 Junior	(Ethnicity no	t tested	)				
Slope Differences for Sex	7	8	, 2643	.2616	.00279	1	426	1.61
Intercept Differences for Sex	8	9	.2616	.2135	.04810	1	427	27.81 **
Chemistry I - II 1984 - 1	985 Junior	(Ethnicity =	White & P	Nonwhit⊴) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.2318	.2252	.00662	1	426	3.67
Intercept Differences for Ethnicity	11	12	.2252	.2135	.01177	1	427	6.49
Chemistry I - 1: 1985 - 19	86 Junior	(Ethnicity no	t tested	)				
Slope Differences for Sex	7	8	.2183	.2084	.00990	1	137	1.74
Intercept Differences for Sex	8	9	.2084	.1347	.07371	1	138	12.85 **
Chemistry 1 - 11 1985 - 1	986 Junior	(Ethnicity =	₩hite & I	Ngorbito) (Sc	ant testa	id)		
Slope Differences for Ethnicity	10	11	. 1506	. 1504	.ნა01 <b>3</b>	1	137	0.02
Intercept Differences for Ethnicity	11	12	. 1504	. 1347	.01573	1	138	2.55
Chemistry 1 - 11 1984 - 19	85 Senior	(Ethnicity no	ot tested	)				
Slope Differences for Sex	7	8	.2964	.2871	.00929	1	156	2.06
Intercept Differences for Sex	8	9	. 2871	.2843	.00276	1	157	0.61
Chemistry 1 - 11 1984 - 1	i985 Seniu	(Ethnicity =	kinite å i	Normaliite) (Sc	a not iest	e <b>d)</b>		
Slope Differences for Ethnicity	10	11	.3082	.2868	.02146	1	156	4.84
Intercept Differences for Ethnicity	11	12	.2868	.2843	.00246	1	157	0.54
Physics 1 - 11 1985 - 198	36 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1688	.1556	.01320	1	232	3.69
Intercept Differences for Sex	ጸ	9	. 1556	.1147	.04087	1	233	11.28 **
Physics 1 - 11 1984 - 19	35 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2281	.2254	.00272	1	166	0.58
Intercept Differences for Sex	8	9	.2254	.1885	.03691	1	167	7.96 *
Government & Civics 1984 -	1985 Fresh	men (Ethnicit	y not tes	tea)				
Slope Differences for Sex	7	3	.2794	.2775	.00197	1	344	0.94
Intercept Differences for Sex	8	9	.2775	.2727	.00486	1	345	2.29
Government & Civics 1984 - 1	985 Sophom	ore (Ethnicit	y not tes	ited)				
Slope Differences for Sex	. 7	8	.1715	.1571	.01436	1	155	2.69
Intercept Differences for Sex	9	Ò	.1571	.1194	.03771	1	156	6 98 *
Government & Civics 1985 - 1	985 Sophom	ore (Ethnicit	y not t <b>e</b> s	sted)				
Slope Differences for Sex	7	8	.1501	.1476	.00249	ì	417	1.22
Intercept Differences for Sex	8	9	. 1476	.1199	.02768	1	418	13.57 *
Government & Civics 1985 -	1986 Sopho	more (Ethnicit	y = White	e & Hispanic)	(Sex not t	ested)	•	
Slope Differences for Ethnicity	10	11	.1497	.1470	.00270	1	388	1.23
Intercept Differences for Ethnicity	11	12	.1470	.1259	.02116	1	389	9.65 *

Table 0-3. (Continued)

	Соп	parison		ξ2				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	۴
Government & Civics 1984 - 198	35 Junior	(Ethnicity I	not tester					
Slope Differences for Sex	7	8	.2550	.2530	.00204	1	456	1.25
Intercept Differences for Sex	8	9	.2531	.2332	.01980	1	457	12.11 **
Government & Civics 1984 - 1	985 Junio	r (Ethnicity	= White &	Nonwhite) (So	ex not test	ed)		
Slope Differences for Ethnicity	10	11	.2454	.2436	.00179	1	456	1.05
Intercept Differences for Ethnicity	11	12	.2436	.2332	. 01039	1	457	6.28
Government & Civics 1989	5 - 1986	Junior (Ethn	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2818	.2897	.00114	1	707	1.12
Sex & Ethnicity Interaction Test	2	3	.2807	.2787	. 00201	1	708	1.98
Slope Differences for Sex	7	8	.2774	.2762	.00127	1	711	1.25
intercept differences for Sc.	Ö	÷	. Zíož	.2462	.02995	1	712	29.46 **
Slope Differences for Ethnicity	10	11	.2475	.2473	.00026	1	711	0.24
Intercept Differences for Ethnicity	11	12	.2473	.2462	.00104	1	712	0.98
Government & Civics 198	4 - 1985	Senior (Ethn	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2548	. 2546	.00015	1	602	0.12
Sex & Ethnicity Interaction Test	2	3	.2546	. 2545	.00015	1	603	0.12
Slope Differences for Sex	7	8	.2526	.2524	.00014	1	606	0.11
Intercept Unifierances for Sex	8	9	.2524	.2415	.01095	1	697	8.89 *
Slope Differences for Ethnicity	10	11	. 2439	.2438	.00016	1	606	û.13
Intercept Differences for Ethnicity	11	12	.2438	. 24 15	.00230	1	607	1.85
History 1984 - 1985	Freshmer	(Ethnicity	= White,	Black & Hispa	nic)			
3-way Interaction Test (ASVAR*sex*ethnicity)	1	2	.2523	. 25 13	.00093	2	1,319	0.82
Sex & Ethnicity Interaction Test	2	3	.2513	. 2484	.00292	2	1,321	2.57
Slope Differences for Sex	7	8	. 2428	.2428	.00003	1	1,327	0.05
Intercept Differences for Sex	8	9	. 2428	.2117	.03106	1	1,328	54.47 **
Slope Differences for Ethnicity	10	11	.2172	.2120	.00520	2	1,325	4.40
Intercept Differences for Ethnicity	11	12	.2120	.2117	.00028	2	1,327	0.24
History 1985 - 1986	Freshmer	(Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2432	.2432	.00000	1	1,343	0.00
Sex & Ethnicity Interaction Test	2	3	.2432	.2431	.00010	1	1,344	0.17
Slope Differences for Sex	7	8	. 2409	.2409	.00001	1	1,347	0.02
Intercept Differences for Sex	8	9	.2409	.2329	.00796	1	1,348	14.13 **
Slope Differences for Ethnicity	10	11	.2349	.2348	.00005	1	1,347	0.09
Intercept Differences for Ethnicity	11	12	. 2348	. 2329	.00187	1	1,348	3.30
History 1984 - 1985	Sephere	e (Ethnicity	r White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2477	. 2470	.00069	1	1,430	1.31
Sex & Ethnicity Interaction Test	2	3	.2470	.2460	.00098	1	1,431	1.87
Slope Differences for Sex	7	8	.2404	.2404	.00001	1	1,434	0.02
Intercept Differences for Sex	3	9	.2404	.2248	.01562	1	1,435	29.52 **
Slope Differences for Ethnicity	<b>1</b> ú	11	.2303	.2302	.00004	1	1,434	0.07
Intercept Differences for Ethnicity	11	12	.2302	.2248	.00544	1	1,435	10.14 *

<u>Table D-3</u>. (Continued)

	Comp	parison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Fuil	Restricted	R <sup>2</sup> Change	df1	df2	ſ
History 1985 - 19	986 Sophomori	e (Ethnicity	= White,	Black & Hispa	anic)		-	
<pre>3-way Interaction Test (ASVAB*sex*ethnicity)</pre>	1	2	.2155	.2150	.00053	2	1,465	0.49
Sex & Ethnicity Interaction Test	2	3	.2150	.2087	.00621	2	1,467	5.80 *
Slope Differences for Sex	7	8	.1578	.1863	.00149	1	1,473	2.71
Intercept Differences for Sex	8	9	. 1863	. 1495	.03682	1	1,474	66.69 **
Slope Differences for Ethnicity	10	11	. 1724	.1641	.00832	2	1,471	7.39 **
History 1984 -	1985 Junior	(Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2765	.2752	.00126	1	1,102	1.92
Sex & Ethnicity Interaction Test	2	3	.2752	.2750	.00025	1	1,103	0.38
Slope Differences for Sex	7	8	.2652	.2650	.03021	1	1,106	0.31
Intercept Differences for Sex	8	9	.2650	.2335	.03149	1	1,107	47.43 **
Slope Differences for Ethnicity	10	11	.2430	.2426	.00032	1	1,106	0.47
Intercept Differences for Ethnicity	11	12	.2426	. 2335	.00912	1	1,107	13.34 **
History 1985 - 1986	Junior (Eth	nicity not le	sted)					
Slepe Differences for Sex	7	8	.2308	.2124	.01845	1	428	10.26 *
History 1985 - 19	86 Junior (E	thnicity = Wh	ite & Bla	ick) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1821	.1813	.úvu/6	1	409	0.38
Intercept Differences for Ethnicity	11	12	. 1813	.1706	.01070	1	410	5.36
History 1984 - 1985	Senior (Eth	nicity not te	sted)					
Slope Differences for Sex	7	8	.3617	.3593	.00237	1	423	1.57
Intercept Differences for Sex	8	9	.3593	.3497	.00964	1	424	6.38
History 1984 - 19	85 Senior (E	thnicity = Wh	ite & Bla	ick) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.3941	. 5903	.00377	1	402	2.50
Intercept Differences for Ethnicity	11	12	.3903	.3598	. 03051	1	403	20.17 **
Foreign Language 1984 · 1	985 freshmen	(Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	. 2787	.2787	.00002	1	1,012	0.02
Intercept Differences for Sex	8	9	.2787	.2269	. 05 174	1	1,013	72.66 **
Foreign Language 1984 - 1985	freshmen (E	thnicity = Wh	ite, Blac	:k & Hispanic)	(Sex not	testec	<b>i)</b>	
Slope Differences for Ethnicity	16	11	.2424	.2398	.00263	2	1,010	1.75
Intercept Differences for Ethnicity	11	iŻ	.2398	.2269	.01285	2	1,012	<b>ბ.56</b> *1
Foreign Language 1985 - 1	986 Freshmer	(Ethnicity	not teste	2 <b>d</b> )				
Stope Differences for Sex	7	8	.2150	.2134	.00156	1	797	1.58
Intercept Differences for Sex	8	ç	.2134	. 1708	. 94268	1	798	43.30 **
Foreign Language 1985 - 1986	E Freshmen (E	Ethnicity = Wh	ite, Blac	ck & Hispanic)	(Sex not	teste	4)	
Sispe Differences for Ethnicity	10	11	.1824	.1760	.00647	2	795	3.14
Intercept Differences for Ethnicity	11	12	.1760	.1708	.00518	2	797	2.51

Table D-3. (Continued)

	Con	parison	,	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Foreign Language 1984 - 1985	Sophomore	(Ethnicity r	not tested	<del></del>				
Slope Differences for Sex	7	8	.2458	.2456	.00017	1	892	0.20
Intercept Differences for Sex	8	9	.2456	.1664	.07917	1	893	93.71 **
Foreign Language 1984 - 1985 S	ophomore (	Ethnicity = Wh	nite, Blac	ck & Hispanic	) (Sex not	tested)	)	
Slope Differences for Ethnicity	10	11	.1807	. 1755	.00519	2	890	2.82
Intercept Differences for Ethnicity	11	12	. 1755	.1664	.00912	2	892	4.93 *
foreign Language 1985	- 1986 Sop	homore (Ethni	icity = W	hite & Nonwhii	re)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1906	. 1891	.00143	1	604	1.06
Sex & Ethnicity Interaction Test	2	3	. 1891	.1888	.00038	î	605	0.28
Slope Differences for Sex	7	8	.1799	.1787	.00120	1	608	0.89
Intercept Differences for Sex	8	9	.1787	.1169	.06173	1	609	45.77 *1
Slope Differences for Ethnicity	10	11	. 1295	. 1295	.00000	1	608	0.00
Intercept Differences for Ethnicity	11	12	.1295	.1169	.01253	1	609	8.77 *
Foreign Language 1984 - 19	985 Junior	(Ethnicity no	ot tested	)				
Slope Differences for Sex	7	8	. 2373	.2341	.00316	1	480	1.99
Intercept Differences for Sex	8	9	.2341	.1518	.08231	1	481	51.69 *
Foreign Language 1984 - 1985	tunion (Ft	hnicity = Whi:	te Niack	& Hispanic)	(Sax not to	nstad)		
Slope Differences for Ethnicity	10	11	.1693	.1646	.00470	2	478	1.35
Intercept Differences for Ethnicity	11	12	.1646	. 1518	.01281	2	480	3.68
Foreign Language 1985 - 19	986 Junior	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	. 1964	.1851	.01128	1	247	3.47
Intercept Differences for Sex	8	9	. 1851	. 1373	.94779	1	248	14.54 *
roneign Language 1985 - 1	1986 Junior	· (Ethnicity =	White &	Hispanic) (Se	x not test	ed)		
Siope Differences for Ethnicity	10	11	.1010	.0934	.00765	1	205	1,74
Intercept Differences for Ethnicity	11	12	.0934	.0915	.00186	1	206	0.42
Foreign Language 1984 – 19	85 Senior	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.2061	.2046	.00149	1	224	0.42
Intercept Differences for Sex	8	9	.2046	.1827	.02190	1	225	6.19
Foreign Language 1984 - 1	1985 Senioi	- (Ethnicity =	White?	Hisomoic) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	. 1364	.1364	.00007	1	185	0.61
Intercept Differences for Ethnicity	11	12	.1364	.1300	.00639	1	186	1.38
Secretary & Office Education 19	985 + 1986	Junior (Ethni	city = Wh	ite & Nonwhit	e) (Sex no	t testo	d)	
Slope Differences for Ethnicity	10	11	.1417	.1404	.00128	1	215	0.32
Intercept Differences for Ethnicity	11	12	.1404	.1402	.00020	1	216	0.05
Secretary & Office Education 19	984 - 1985	Senior (Ethni	city = Wh	i <b>te &amp; Nonwh</b> it	e) (Sex no	t teste	·i)	
Stope Linie chies for Edinierty	10	17	.1163	.1062	. 0 1009	1	220	2.51

<u>Table D-3</u>. (Continued)

	Comp	parison		2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Typing & Word Processing 1984 -	1985 Fresh	nmen (Ethnic	ty not te	ested)				
Slope Differences for Sex	7	8	. 2169	.2165	.00044	1	507	0.28
Intercept Differences for Sex	8	9	.2165	.2036	.01281	1	508	8.30 *
Typing & Word Processing 1984	-1985 Frest	nmen (Ethnicii	y = White	e, Black & Hi	spanic) (Sc	x not	tested)	
Slope Differences for Ethnicity	10	11	.2073	.2056	.00168	2	505	0.54
Intercept Differences for Ethnicity	11	12	.2056	.2037	.∪0197	2	507	0.63
Typing & Word Processing 1985 -	1985 Frest	nmen (Ethnic	ity not to	ested)				
Slope Differences for Sex	7	8	.1862	.1802	.00003	1	492	0.02
Intercept Differences for Sex	8	9	.1802	.1508	.02939	1	493	17.68 **
Typing & Word Processing 1985	-1986 Frest	nmen (Ethnica)	ty = White	e & Hispanic)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	. 1444	.1434	.00102	1	445	0.53
Intercept Differences for Ethnicity	11	12	. 1434	.1424	.00106	1	446	0.55
Typing & Word Processing 1984 -	1985 Sophor	nore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.2089	. 2083	.00067	1	631	0.53
Intercept Differences for Sex	8	9	. 2033	.1662	.04203	1	632	33.55 **
Typing & Word Processing 1984-	1985 Sophor	nore (Ethnici	ty = White	e, Black & Hi	spanic) (°c	x not	tested)	
Slope Differences for Ethnicity	10	11	.1672	.1664	.00086	2	629	0.32
Intercept Differences for Ethnicity	11	12	. 1664	. 1663	.00012	2	631	0.04
Typing & Word Processing 1985 -	1986 Sophor	nore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.1649	. 1599	.00502	1	405	2.43
Intercept Differences for Sex	8	9	. 1599	. 1506	.00934	1	406	4.51
Typing & Word Processing 1985-	1986 Sopho	more (Ethnici	ty = Whit	e & Black) (S	ex not test	ted)		
Slope Differences for Ethnicity	10	11	.1578	.1551	.00271	1	374	1.20
Intercept Differences for Ethnicity	11	12	. 1551	. 1514	.00363	1	375	1.61
Typing & Word Processing 1984	- 1985 Jun	ior (Ethnici	ty nat 🕶	sied)				
Stope Differences for Sex	7	8	.2101	.2084	.00165	1	391	0.82
Intercept Differences for Sex	8	9	.2085	.1456	.06283	1	392	31.12 **
Typing & Wora Processing 198	4-1985 Jun	ior (Ethnicit	y = White	& Black) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.1423	.1423	.00002	1	359	0.61
Intercept Differences for Ethnicity	11	12	.1423	.1408	.00153	1	<b>3</b> 60	0.64
Typing & Word Processing 1985	- 1986 Jun	ior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.1566	. 1493	.00729	1	221	1,91
Intercept Differences for Sex	8	9	.1493	.1128	.03644	1	222	9.51 *
Typing & Word Processing 198	5·1986 Jun	ior (Ethnicit	y = White	& Nonwhite)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	.1380	.1341	.00390	1	221	1.00
Intercept Differences for Ethnicity	11	12	. 1341	.1129	.02126		222	5.45

<u>Jable D-3</u>. (Continued)

	Cor	mparison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Typing & Word Processing 1984	- 1985 Sei	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.2095	.2074	.00218	1	216	0.50
Intercept Differences for Sov	δ	9	.2074	.1740	.03341	1	217	9.15 *
Accounting/Bookkeeping 1985	1986 Sophi	omore (Ethnic	ity not t	octed)				
Slope Differences for Sex	7	8	.2105	.2104	00016	1	311	J.06
Intercept Differences for Sex	8	9	.2104	.1614	.04893	1	312	19.33 **
Accounting/Bookkeening 1984	- 1985 Jun	ior (Ethnicit	y not t <b>e</b> s	ted)				
Slope Differences for Sex	7	8	.2927	.2890	.00371	1	239	1.25
Intercept Differences for Sex	8	9	.2890	.1958	.09319	1	240	31.45 **
Accounting/Bookkeeping 1985	- 1986 Jun	ior (Ethnic:t	y not tes	ted)				
Slope Differences for Sex	7	8	.1552	.1525	.00267	1	185	0.58
Intercept Differences for Sex	8	9	.1525	.1145	.03805	1	186	8.35 *
Accounting/Bookkeeping 1984	- 1985 Sen	ior (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2161	.2109	.00518	1	247	1.63
Intercept Differences for Sex	8	9	.2109	.1735	.03741	1	248	11.76 **
Home Economics 1984 - 198	35 Freshmen	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.2172	.2165	.00071	1	547	0.50
Intercept Differences for Sex	8	9	.2165	.1697	.04680	1	548	32.74 **
Home Economics 1984-198	85 freshmen	(Ethnicity =	White & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.2321	.2318	.00037	1	519	0.25
Intercept Differences for Ethnicity	11	12	.2318	.1581	.07365	1	520	49.85**
Home Economics 1985 - 19	86 Freshmen	(Ethnicity n	ot tested	i)				
Slope Differences for Sex	7	8	. 1543	.1529	.00139	1	312	0.51
Intercept Differences for Sex	8	9	.1529	.0932	.05966	1	313	22.04 **
Home Economics 1985-19	86 freshmen	(Ethnicity =	White & N	onwhite) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	.1044	.1036	.00077	1	<b>3</b> 12	0.27
Intercept Differences for Ethnicity	11	12	.1037	.0932	.01043	1	313	3.64
Home Economics 1984 - 19	85 Sephomor	e (Ethnicity	not teste	·á)				
Stope Differences for Sex	7	8	.2007	.2000	.00065	1	321	0.26
Intercept Differences for Sex	8	9	.2000	.1475	.05248	1	322	21.12 *
Home Economics 1984-198	5 Sophomore	(Ethnicity =	White & N	Drwhite) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	<b>1</b> i	.1905	. 1876	.00292	1	321	1.16
Intercept Differences for Ethnicity	11	12	.1876	.1475	.04003	1	322	15.96**
Home Economics 1985 - 19	86 Sophanier	e (Ethnicity	not teste	ed)				
Stope Differences for Sex	7	8	.1668	.1667	.00067	1	394	0.04
Intercept Differences for Sex	8	9	.1667	. 1102	. 05655	1	395	26.81 *

Table 0.3. (Concluded)

	Co	mparison		<sup>وک</sup>				
F-Yest Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> change	df1	df2	F
Home Economics 1985-1986	Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	.1138	.1137	.00010	1	394	0.05
Intercept Differences for Ethnicity	11	12	.1137	.1102	.09348	1	395	1.55
Home Economics 1984 - 19	985 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1832	.1831	.00007	1	279	0.02
Intercept Differences for Sex	8	9	.1831	.1550	.02806	1	280	9.62 *
Home Economics 1984-19	So Junior .	Ethnicity = Wh	itc & Non	white) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	. 1604	.1604	.00000	:	279	0.00
Intercept Differences for Ethnicity	11	12	. 1604	.1550	.00538	1	280	1.79
Home Economics 1985 - 1	986 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2243	.2236	.00070	1	358	0.32
Intercept Differences for Sex	8	9	. 2236	.1102	.11338	1	359	52.43 *
Home Economics 1985-19	86 Junior (	fichricity = Wh	ite & Non	white) (Sex n	of tested)			
Slope Differences for Ethnicity	10	11	.1140	.1140	.00003	1	358	0.01
Intercept Differences for Ethnicity	11	12	.1140	.1102	.00379	1	359	1.54
dome Economics 1984 - 1	985 Senier	(Ethnicity no	t tested)					
Slope Differences for Sex	7	S	.1970	.1969	00011	1	313	0.04
Intercept Differences for Sex	8	9	. 1969	.1539	. 04; 93	1	319	17.05 *
Home Economics 1984-1	985 Senio:	(Ethnicity = W	hit ን ኤ No	nwhite) (Sex	not tested	)		
Slope Differences for Ethnicity	10	11	.1622	.1542	.00799	1	318	3.03
Intercept Differences for Ethnicity	11	12	.1542	. 1539	.00026	1	3 ' 9	0.10
Computer Programming 1985 -	1986 Sophoir	ore (Ethnicit	v not tes	ted)				
Slope Differences for Sex	7	8	. 2625	.2615	.00104	1	227	0.32
Intercept Differences for Sex	8	ç	.2615	.1924	.06910	1	228	21.33 *
Computer Programming 1984	- 1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	. 2957	.2921	. 00365	1	240	1.24
Intercept Differences for Sex	8	9	.2921	.2725	.61960	1	241	6.67
Computer Programming 1985	- 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.3553	3541	,0012;	1	157	0.30
Intercept Differences for Sex	8	9	.3541	, 2490	.10517	1	158	25.73 *
Computer Programming 1984	- 1985 Seni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2208	.2198	.00092	1	152	0.18
- ; · · · - · · · <del></del> <del></del>		9	.2198			•		0.07

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < ,001.

<u>Table D-4</u>. F-Tests of Significance for Mechanical & Crafts Composite

	Co	mparison		<sub>8</sub> 2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
English 1 - IV 1984 -	1985 Fre	shmen (Echnic	ty = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2005	. 1998	.00072	5	2,422	1.09
Sex & Ethnicity Interaction Test	2	3	.1998	. 1957	.00406	2	2,424	6.15 *
Slope Differences for Sex	7	3	.1950	.1897	.00528	1	2,430	15.92 *
Slope Difterences for Ethnicity	10	11	.1001	.1006	.00005	2	2,428	0.07
Intercept Differences for Ethnicity	11	12	.1000	.0988	.00101	2	2,430	1.64
English I - 1V 1985 -	1986 Fre	shmen (Ethnic	ity = ¥hi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1495	. 1471	.00238	2	1,990	2.78
Sep & Ethnicity Interaction Test	2	3	.1499	. 1470	.00292	2	1,991	3.41
Stupe Differences for Sex	7	8	.1366	.1337	.00293	1	1,997	6.79 *
Intercept Diffranchies for Sex	8	9	.1337	.0649	.06873	1	1,998	158.52 *
Slope Differences for Ethnicity	10	11	.0763	.0737	.00266	2	1,995	2.87
Intercept Differences for Ethnicity	11	12	.0 <i>7</i> 37	.0649	.00872	2	1,997	9.40 *
English ! - 1V 1984 -	1985 Soph	omone (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2058	.2051	.00072	2	2,296	1.04
Sex & Ethnicity Interaction Test	2	3	.2051	.2043	.00081	2	2,298	1.16
Slope Differences for Sex	7	8	.2020	.1873	.01468	1	2,304	42.38
Slope Differences for Ethnicity	10	11	.0925	.0915	.00101	2	2,302	1.28
Intercept Differences for Ethnicity	11	12	.0915	.0831	.00841	2	2,304	10.57
English 1 · :V 1985 -	1986 Sopt	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1986	.1985	.00006	2	1,942	0.07
Sex & Ethnicity Interaction Test	2	3	. 1985	.1984	.00015	2	1,944	0.19
Slope Differences for Sex	7	8	.1901	. 1779	.01222	1	1,950	29.42 *
Slope Differences for Ethnicity	10	11	.0888	.0883	.00055	2	1,948	0.59
intercept Differences for Ethnicity	11	12	.0883	.0664	.02182	2	1,950	23.33 1
English : - IV 1984	- 1985 Ju	unior (Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1796	.1795	.00012	2	1,721	0.12
Sex & Ethnicity Interaction Test	2	3	. 1795	. 1791	.00039	2	1,723	0.41
Slope Differences for Sex	7	8	.1761	.1632	.01293	1	1,729	27.13
Slope Differences for Ethnicity	10	11	.0436	.0435	.00009	2	1,727	0.09
Intercept Differences for Ethnicity	11	12	.0435	.0329	.01065	2	1,729	9.63 *
English 1 - IV	/ 1985-86	Junior (Ethrii	city = Wh	nte & Black)				
3-way Interaction Te. (ACMAB*sex*ethnicity)	1	?	. 1660	. 1660	00000	1	1,258	0.00
Sex & Ethnicity Interaction Test	2	3	.1660	. 1660	.00000	1	1,259	0.00
Stope Differences for Sex	7	8	.1655	, 1514	.01496	1	1,262	21.27
Siepe Differences for Ethnicity	10	11	.0300	.0290	.00091	1	1,262	1.18
Tropa a reservation so a control cy	, ,	12	.0290	.0209	.60813	•	1,263	10.58

	Compar	ison		γ,				
F-Test Comparison	Full Ro	stricted	Fult	Restricted	R <sup>2</sup> Change	df1	df2	F
English 1 - 1V 1984	- 1985 Senior	(Ethnicit	y = White	e, Black & Hi	spanic)			
3-way Interaction Test (ASVA9*sex*cthricity)	1	2	.1543	. 1540	.00039	2	1,275	0.29
Sex & Ethnicity Interaction Test	2	3	. 1540	. 1521	.00190	2	1,277	1.43
Slope Differences for Sex	7	8	.1466	. 1375	,00917	1	1,283	13.78 **
Slope Differences for Ethnicity	10	11	.0715	. 0686	.00280	2	1,281	1.93
Intercept Differences for Ethnicity	11	12	.0687	.0643	. 00436	2	1,283	3.01
General Math 1984 -	1985 Freshmer	(Ethnicit	y = White	c, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0612	.0606	.00058	2	1,16/	0.36
Sex & Ethnicity Interaction lest	2	3	. 0666	. 0588	.00180	2	1,169	1.12
Slope Differences for Sex	7	8	.0545	.0543	. ეი021	1	1,175	0.26
Intercept Differences for Sex	8	ያ	. 0543	.0337	.02057	1	1,176	25.57 **
Slope Differences for Ethnicity	10	11	. 0379	.0359	.00197	2	1,173	1.20
Intercept Differences for Ethnicity	11	12	.0359	.0337	.00220	2	1,175	1.34
General Math	1985 - 1986 (	reshmen (El	hnicity	= White, Blac	k & Hispan	ic)		
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0307	.0307	.00002	1	549	0.01
Sex & Ethnic ty Interaction Test	2	3	.0307	.0284	.00228	1	550	1.30
Slope Differences for Sex	7	8	.0234	.0233	.00006	1	553	0.04
Intercept Differences for Sex	8	9	.0233	.0116	.01166	1	554	6.62
Slope Differences for Ethnicity	10	11	.0163	.0125	.00381	1	553	2.14
Intercept Differences for Ethnicity	11	12	.0125	.0116	.00087	1	554	0.49
General Math 1984 -	1985 Sophomo	re (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0708	.0647	. 00611	2	736	2.42
Sex & Ethnicity Interaction Test	2	3	.0647	.0601	.00459	2	738	1.81
Slope Differences for Sex	7	8	.0473	.0452	.00205	1	744	1.60
Intercept Differences for Sex	8	9	.0452	.0351	.01013	1	745	7.90 *
Slope Differences for Ethnicity	10	11	.0457	.0443	.00148	2	742	0.58
Intercept Differences for Ethnicity	11	12	.0443	.0351	.00917	2	744	3.57
General Math 1985 -	1986 Sophomo	re (Ethnic	ity = ₩h:	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1112	.1037	.00258	1	305	0.88
Sex & Ethnicity Interaction Test	2	3	. 1087	. 1081	. 00060	1	306	0.21
Slope Differences for Sex	7	8	.0922	.0922	.00003	1	309	0.01
Intercept Differences for Sex	8	9	.0922	.0330	.05924	1	<b>31</b> 0	20.23 **
Slope Differences for Ethnicity	10	11	.0554	.0481	.00767	1	369	2.38
Intercept Differences for Ethnicity	11	12	.0481	.0330	.01510	1	310	4.92
General Math 1984	- 1985 Jamor	(Ethnicit	y = ₩hito	e & Black)				
3-⊬ y Interaction Test (ASVAB*sex*ethnicity)	1	2	.0708	.0689	.00185	1	256	0.53
Ser & Ethnicity Interaction Test	2	3	.0589	.0671	.00183	1	267	0.53
Slope Differences for Sex	7	8	.0619	.0605	.00138	1	270	0.40
Intercept Differences for Sex	8	9	. 0605	.0169	.04358	1	271	12.57 *
Stope Differences for Ethnicity	10	11	.0268	.0204	.00647	1	<b>27</b> 0	1.79
Intercept Differences for Ethnicity	11	12	.0204	.0169	.00345	1	271	J.95

Table 0-4. (Continued)

	Con	mparison		R <sup>2</sup>			222 223 195 196 230 231 203 204 1,180 1,181 1,184 1,185 1,184 1,185	
F-Test Comparison	Fuli	Restricted	Full	Restricted	R <sup>2</sup> Change	dtj	of2	f
General Math 1985 - 1986	Junior (	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1102	. 1043	.00588	1	222	1.47
Intercept Differences for Sex	8	9	. 1043	.0430	.06138	1	223	15.28 **
General Math 1985 - 1986	Junior	(Ethnicity = W	hite & Bl	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.0623	.0599	.00241	1	195	0.50
Intercept Differences for Ethnicity	11	12	.0599	.0554	.00447	1	196	0.93
General Math 1984 - 1985	Senior -	(Ethnicity not	tested)					
Stope Differences for Sex	7	8	.1048	.0837	.01606	1	230	4.13
Intercept Differences for Sex	8	9	.0887	.0783	.01037	1	231	2.63
General Math 1984 - 198	5 Senier	(Ethnicity ≃	Wnite & B	lack) (Sex no	t tesled)			
Slope Differences for Ethnicity	10	11	.1109	. 1691	.00188	1	203	0.43
Intercept Differences for Ethnicity	11	12	.1090	.0941	.01490	1	204	3.41
Algebra 1984 - 1985	freshme	n (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnisity)	1	2	. 1351	. 1312	.00385	1	1,180	5.25
Sex & Ethnicity Interaction Test	2	3	.1312	.1307	.00054	i	•	0.74
Stope Differences for Sex	7	8	. 1295	. 1224	.00713	1	•	9.70 *
Intercept Differences for Sex	8	9	.1224	.0488	.07352	1		99.27 **
Slope Differences for Ethnicity	10	11	.0524	. 0488	.00351	1	•	4.36
Intercept Differences for Ethnicity	11	12	.0488	.0488	.00000	1	1,185	0.00
Algebra 1985 - 1986	Freshme	n (Ethnicity	≃ White δ	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1597	. 1595	.00016	1	708	0.13
Sex & Ethnicity Interaction Test	2	3	.1595	.1581	.00140	1	709	1.18
Slope Differences for Sex	7	8	.1509	.1446	.00623	1	712	5.23
Intercept Differences for Sex	8	9	.1446	.0618	.08285	1	713	69.06 **
Slope Differences for Ethnicity	10	11	.0765	.0750	.00152	1	712	1.17
Intercept Differences for Ethnicity	11	12	.0750	.0618	.01317	1	713	10.15 •
Algebra 1984 - 1985	Sophomo	re (Ethnicity	/ = White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 0880	.0876	.00045	1	871	0.43
Sex & Ethnicity Interaction Test	2	3	.0876	.0813	. 006 <b>3</b> 0	1	872	6.02
Slope Differences for Sex	7	8	.0808	.0725	.00823	î	875	7.83 *
Intercept Differences for Sex	8	9	.0725	.0265	.04602	1	876	43.47 *
Slope Differences for Ethnicity	10	11	.0279		.00012	1	875	0.11
Intercept Differences for Ethnicity	11	12	.0273	.0265	.00126	1	876	1.14
Algebra 1985 - 1986	5 Sephemo	ore (Ethnicity	/ = White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1150		.00008	1	617	0.05
Sex & Ethnicity Interaction Test	2	3	.1149		.00079	1	618	0.55
Slope Differences for Sex	7	8	.1065		.00642	1	621	4.46
Intercept Differences for Sex	8	9	.1001		.(4159	1	622	28.74 *
Stope Differences for Ethnicity	10	11	.0673		.00044	1	621	0.30
Intercept Differences for Ethnicity	11	12	.0668		.00829	1	622	5.53

Table D 4. (Continued)

	Соп	parison	þ	,2		_		
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	f
Algebra	1984 - 1985 Junior	(Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*etI	uncity) 1	2	. 1092	.1027	. u J650	1	490	3.57
Sex & Ethnicity Interaction Test	2	3	.1124	.1122	.00022	1	490	0.12
Slope Differences for Sex	7	8	.1006	.0931	.00750	1	493	4.11
Intercept Differences for Sex	8	9	. 0931	.0310	.06211	1	494	33.83 **
Slope Differences for Ethnicity	10	11	.0415	.0324	.00905	1	493	4.65
Intercept Differences for Ethnicity	11	12	.0325	.0310	.00148	1	494	5.76
Algebra 1985	- 1986 Junior (Eth	nicity not te	sted)					
Stope Differences for Sex	7	3	.0831	.0591	.02410	1	273	7.18 *
Algebra 198	5 - 1986 Junior (Eth	nnicity = Whit	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for Ethnicity	10	וו	.0592	.0591	,00009	1	275	0.03
Intercept Differences for Ethnicity	11	12	.0591	.03\$8	.01928	1	274	5.51
Algebra 1984	- 1985 Senior (Ett	inicity not te	sted)					
Slope Differences for Sex	7	৪	.1089	,0848	.92411	1	265	7.17 *
Algebra 198	4 - 1985 Selitor (Etl	nnicity = Whit	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	. 0364	.0206	.01579	1	245	4.34
Intercept Differences for Ethnicity	11	12	.0206	.0200	.00065	1	266	0.18
Geometry 1985	- 1986 Freshillen (	Ethnicity not	tested)					
Stope Differences for Sex	7	8	. 1735	.1710	.00244	1	511	1.51
Intercept Differences for Sex	8	9	.1710	.1376	.03341	1	512	20.63 **
Geometry 1985 -	1986 Freshmen (Ethn	icity = White,	Black &	Kispanic) (Sc	ex not test	ed)		
Slope Differences for Ethnicity	10	1:	.1476	.1461	.00148	2	509	0.44
Intercept Differences for Ethniuity	11	12	. 1461	.1376	.00850	2	511	2.54
Geometry 1984	- 1985 Sophomore (	Ethnicity not	tested)					
Stope Differences for Sex	7	8	.1909	.1878	.00312	1	561	2.16
Intercept Differences for Sex	8	9	.1878	.1321	.05563	1	562	38.49 **
Geometry 1984 -	1985 Sophomore (Eth	nicity = White	e, Black &	. Hispanic) (S	Sex not tes	ted)		
Slope Differences for Ethnicity	10	11	.1444	.1351	.00938	2	559	3.07
Intercept Diffurences for Ethnicity	11	12	. 1351	.1321	.00294	2	561	<b>ω.95</b>
Geometr/ 1985	- 1986 Sephomone (	Ethnicity not	tested)					
Stope Differences for Sex	7	8	.2 <b>3</b> 00	.2281	.00188	1	410	1.00
Intercept Differences for Sex	8	Y	.2281	.1490	.07918	1	411	42.16 •
Geometry 19	985 - 1986 Scribonord	(t.hnicity =	White & 5	Black) (Sex ne	ot tested)			
Stope Differences for Ethnicity	10	11	.1871	.1785	3 <del>3</del> 300.	•	371	3.95
Intercept Differences for Ethnicity	11	12	. 1785	, 1514	.92708	1	3/2	12.26 *
Geometry 198	34 - 1 <del>9</del> 85 Junior (E	thnicity not	tested)					
Slope Differences for Sex	i	8	.2017	.1828	.01893	1	<b>3</b> 05	7.23 *

Table D-4. (Continued)

	Co	mparison		k <sup>2</sup>				
st Companison	füll	Restricted	اال	Restricted	R <sup>2</sup> Change	dfj	df2	F
Geometry 1984 - 1985 Ju	rior (E	thnic.ty = Whit	te & Nonw	hite) (Sex no	t tested)			
e Differences for Ethnicity	10	11	. 1145	.1103	.00423	1	<b>3</b> 05	1.46
rcept Differences for Ethnicity	11	12	.1103	.1103	.00000	1	<b>3</b> 06	0.00
Geometry 1985 - 1986 Jun	1101 (E	thnicity not to	ested)					
Mifferences for Sex	7	8	. 2455	.2219	.02363	1	123	3. გა
a cept Differences for Sex	8	9	.2219	. 1533	.06859	1	124	10.55 *
Geometry 1985 - 1985 Ju	ınıor (E	thnicity = Whii	te & Nonw	hite) (Sex na	t tested)			
□ Differences for Ethrocity	16	11	.2440	.2312	,01275	1	123	2.08
roopt Differences for Ethnicity	11	12	.2312	. 1533	.07792	1	124	12.57 *
Geometry 1984 - 1985 Ser	nor (E	thnicity rot to	ested)					
e Differences for Sex	7	8	.2058	ðċ6\$.	.00013	1	107	0.02
rcept Differences for Sex	8	Ģ	.2057	. 1959	.00971	1	108	1.32
Geometry 1984 - 1985 Sc	enor (F	thoicity = Wor	te & Nonw	hite) (Sex no	t tested)			
e Differences for Ethnicity	10	11	.2123	.2123	.00006	1	107	0.01
rcept Differences for Ethnicity	11	12	.2123	. 1959	.01633	1	108	2.24
General Science 1984 - 1	1985 Fre	shmen (Ethnic	it∨ = Whi	te. Black & H	ispanic)			
y Interaction Test (ASVAB*sex*ethnicity)	•	2	.1918	. 1897	.00213	2	1,956	2.58
& Ethnicity Interaction Test	2	3	. 1897	.1829	.00680	2	1,958	8.22 *
istent Over or Under prediction of Subgroup	2	4	. 1897	.1872	.00246	3	1,958	1.98
General Science 1985 - 1986	Freshine	n (Ethnicity:	not teste	d)				
me Differences for Sex	7	8	.1249	.1209	.00406	1	274	1.27
rcept Differences for Sex	3	9	.1209	.0953	.02554	1	275	7.99 *
General Science 1985 - 198	36 Frasi.	men (Ethnicity	= White	& Black) (Sex	not tested	<del>)</del> )		
e Differences for Ethnicity	70	11	.1099	.0960	.01389	1	240	3.75
cept Differences for Ethnicity	11	12	.0960	.0953	.00069	1	241	0.18
General Science 1984 - 1	1985 Sop	homore (Ethni	city = Wh	ite & Nonwhit	e)			
y Interaction Test (ASVAB*sex*ethnicity)	1	2	.2004	.2003	.00002	1	341	0.01
& Ethnicity Interaction Test	2	3	.2003	.1859	.01447	1	342	6.19
e Differences for Sex	7	8	. 1673	.1641	.00321	1	345	1.33
rcept Difference, for Sex	8	y	.1641	.0050	.07918	1	346	32.78
me Differences for Ethnicity	10	11	.1023	.0983	.00406	1	345	1.56
racpt Differences for Ethnicity	11	12	. 0983	. 0849	.01335	1	346	5.12
General Science 1985 - 1986 S	sephoner	e (Ethnicity	not teste	d)				
e Differences for Sex	7	8	. 1422	. 1422	.00000	1	183	0.00
ercept Differences for Scx	3	Ģ	.1422	. 0855	.05678	1	184	12.18

Table 0-4. (Continued)

	Cor	nparison		,2				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	dfz	f
General Science 1985 - 198	6 Sophom	ore (Ethnicity	= White &	& Biack) (Sex	not tested	1)		
Stope Differences for Ethnicity	19	11	.1417	.1403	.00130	1	158	0.24
Intercept Differences for Ethnicity	11	12	.1404	.1001	.04026	1	159	7.45 *
Genera' Science 1985 - 1986	Junior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1527	.1469	.00582	1	258	1.77
Intercept Differences for Sex	8	9	.1469	.1046	.04233	1	259	12.85 *
General Science 1985 - 198	6 Junior	(Ethnicity = V	lhite & No	onwhite) (Scx	not tested	i)		
Slope Differences for Ethnicity	10	11	.1129	.1127	.00019	1	258	0.05
Intercept Differences for Ethnicity	11	12	.1128	.1046	.00818	1	259	2.39
General Science 1984 - 1985	Senior	(Ethnicity not	tested)					
Stope Differences for Sex	7	8	.1035	.1022	.00131	1	182	0.27
Intercept Differences for Sex	8	9	.1022	.0580	.04415	1	183	9.00
Biclogy 1 - 11 1984 - 1985	Engshmen	(Ethnicity no	ot tested	)				
Stope Differences for Sex	7	8	.2174	,2163	.00105	1	299	0.40
Intercept Differences for Sex	8	9	.2163	. 1554	.06097	1	300	23.34 *
Biology 1 - 11 1984 - 1985	Ecachmo	n /Ethnicity -	Uhien P	Non-hital (Co	s pot tost	5d3		
Slope Differences for Ethnicity	10	11	.1618	,1575	.00431	1	299	1.54
Intercept Differences for Ethnicity	11	12	.1575	. 1554	.00216	1	300	0.77
Biology I - 11 1985 -	105 . Fro	choop (Ethnic	ity = Uhi	to f Glack)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1294	.1286	.00087	1	.,120	1.12
Sex & Ethnicity Interaction Test	2	3	. 1302	.1299	.00031	1	1,120	0.40
Slope Differences for Sex	7	8	. 1293	.1278	.00154	1	1,123	1.98
Intercept Differences for Sex	8	9	.1278	.0677	.06013	1	1,124	77.49 *
Slope Differences for Ethnicity	10	11	.0692	.0687	.00049	1	1,123	0.59
Intercept Differences for Ethnicity	11	12	.0687	.0677	.00105	1	1,124	1.27
Biology I - 11 1984 - 1	1985 Saph	onkije (Ethnic	itv= Whi	te Black & S	(spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1 30pm	2	. 1676	.1654	.00224	2	1,371	1.85
Sex & Ethnicity Interaction Test	2	3	. 1654	. 1627	.00267	2	1,373	2.20
Slope Differences for Sex	7	8	. 1466	.1368	.00982	1	1,379	15.88
Slope Differences for Ethnicity	10	11	.0956	.0936	.00201	2	1,377	1.53
Intercept Differences for Ethnicity	11	12	.0936	.0906	,00297	2	1,379	2.26
Biology 1 - 11 1985 - 1986	Sophomor	e (Ethnicity)	riot teste	d)				
Slope Differences for Sex	7	8	.1628	. 1461	.01664	1	335	6.66
Intercept Differences for Sex	8	9	. 1461	.0451	.10105	1	336	39.76 *
Biology I - II 1985 - 1986 Scp	ohodore (	Ethnicity = Wh	ite Alac	k & Hispanic)	(Sex not	tostod	1)	
Stope Differences for Ethnicity	10	11	.0507	.0477	.00300	2	333	0.53
,		• •				-		

Table 0-4. (Continued)

	Com	parison	i	,2				· ·
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	f
Biology I - !! 1984 -	1985 Jun	ior (Ethnicit	y = White	e & Nonwhite)				
3-way Interaction lest (ASVAB*sex*ethnicity)	1	2	.1870	.1870	.00005	1	397	0.02
Sex & Ethnicity Interaction Test	2	3	.1870	.1869	.00004	1	398	0.02
Slope Differences for Sex	7	8	.1820	.1820	.00002	1	401	0.01
Intercept Differences for Sex	8	9	.1820	.1026	.07938	1	402	39.01 **
Slope Differences for Ethnicity	10	11	.1044	.1039	.00056	1	401	0.25
Intercept Differences for Ethnicity	11	12	.1039	.1026	.00127	1	402	0.57
Biology I - II 1985 - 1986	Junior	(Ethnicity no	tested)					
Slope Differences for Sex	7	8	.2267	.2249	.00182	1	147	0.35
Intercept Differences for Sex	8	9	.2249	.0979	.12701	1	148	24.25 **
Biology I - 11 1984 - 1985	Serior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.3359	.3297	.00614	1	195	1.80
Intercept Differences for Sex	8	9	.3297	. 2366	.09312	1	196	27.23 *1
Biology I - Ii 1984 - 19	985 Senior	(Ethnicity =	White &	Black) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.3027	.3026	.00015	1	176	0.04
Intercept Differences for Ethnicity	11	12	.3026	. 2393	.06329	1	177	15.06 *
Chemistry 1 - 11 1985 - 1986	5 Freshmen	n (Éthnicity)	not reste	ď				
Slope Differences for Sex	7	8	.1089	. 1065	.00233	1	128	0.34
Intercept Differences for Sex	8	9	.1065	.0467	.05983	1	129	8.64 *
Chemistry I - II 1984 - 1985	Sophomore	e /Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.1370	. 1244	.01255	1	168	2.44
Intercept Differences for Sex	8	9	.1244	.0598	.06467	1	169	12.48 *
Chemistry 1 - 11 1985 - 1986	Sophomor	e (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.1045	.0922	.01227	1	430	5.89
Intercept Differences for Sex	8	9	. 0922	.0196	.07263	1	431	34.49 *
Chemistry I - II 1984 - 19	85 Junior	(Ethnicity n	ot tested	1)				
Slope Differences for Sex	7	8	. 1443	. 1417	.00257	1	426	1.28
Intercept Differences for Sex	8	9	. 1417	.0511	.09064	1	427	45.09 *
Chemistry 1 - 11 1984 - 1	985 Junio	r (Fthnicity =	White &	Nonwhite) (Se	ex not test	ed)		
Slope Differences for Ethnicity	10	11	. 0536	.0524	.00122	1	426	0.55
Intercept Differences for Ethnicity	11	12	. 0524	. 0511	.00132	1	427	0.60
Chemistry I - II 1985 - 19	86 Junior	(Ethnicity r	ot tested	d)				
Slope Differences for Sex	7	8	. 1526	. 1376	.01596	1	137	2.44
Intercept Differences for Sex	8	9	. 1376	.0345	.10308	1	138	16.49 *
Chemistry I - II 1985 - 1	986 Junio	or (Ethnir ty =	White &	Nonwhite) (Se	ex not test	(bo		
Slope Differences for Ethnicity	10	1:	.0407	. 0394	.00128	1	137	0.18
stope billerences for ethinercy		•	.0401	.0374	.00120	•		,,,,

Table 0-4. (Continued)

	Cor	nparison	R	2	-			
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Chemistry I - II 1984 - 1	985 Senior	(Ethnicity n	ot tested)	<del>_</del> _	· ——			
Slope Differences for Sex	7	8	.1505	.1497	.00075	1	156	0.14
Intercept Differences for Sex	8	9	.1497	. 1359	.01381	1	157	2.55
Chemistry I - II 1984 -	1985 Senio	r (Ethnicity =	White & N	lonwhite) (Se	x not teste	:d)		
Slope Differences for Ethnicity	10	11	.1540	. 1384	.01553	1	156	2.86
Intercept Differences for Ethnicity	11	12	. 1384	. 1359	.00251	1	157	0.46
Physics I - I! 1984 - 19	85 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1261	. 1195	.00660	1	166	1.25
Intercept Differences for Sex	8	9	.1195	.0342	. 08526	1	167	16.17 **
Government & Civics 1984 -	1985 Fresh	•	y not lest					
Slope Differences for Sex	7	8	. 1779	.1748	.00317	1	344	1.33
Intercept Differences for Sex	8	۶	. 1748	.1327	.04208	1	345	17.59 **
Government & Civics 1984 - 1	985 Sophom	ore (Ethnicit	y not test	ted)				
Slope Differences for Sex	7	8	. 1104	. 1063	.00401	1	155	0.70
Intercept Differences for Sex	8	9	. 1063	.0354	. ი *097	1	156	12.39 **
Government & Civics 1985 - 1	986 Soption	ore (Ethnicit	y not test					
Slope Differences for Sex	7	8	.0812	.0721	.00908	1	417	4.12
Intercept Differences for Sex	8	9	.0721	.0252	.04695	1	418	21.15
Government & Civics 1985 -	1986 Sopho	more (Ethnicit	y = White	•				
Slope Differences for Ethnicity	10	11	.0614	.0612	.00028	1	388	0.12
Intercept Differences for Ethnicity	11	12	.0611	.0252	.03598	1	389	14.91 *
Government & Civics 1984 -		· · · · · · · · · · · · · · · · · · ·						
Slope Differences for Sex	7	8	. 1803	.1722	.00805	1	456	4.48
Intercept Differences for Sex	8	9	. 1722	.0952	.07706	1	457	42.54 *
Government & Civics 1984 -	1985 Juni	or (Ethnicity		Nonwhite) (9		ted)		
Slope Differences for Ethnicity	10	11	.1114	. 1098	.00167	1	456	0.86
Intercept Differences for Ethnicity	11	12	. 1098	.0952	.01459	1	457	7.49 *
Government & Civics 1	1985 - 1986	Junior (Ethr	nicity = W	hite & Black)	ı			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1753	.1752	.00017	1	707	0.15
Sex & Ethnicity Interaction Test	5	3	.1752	.1746	.00053	1	708	0.45
Slope Differences for Sex	7	8	.1708	.1508	.02002	1	711	17.17 *
Slope Differences for Ethnicity	10	11	.0745	.0715	.00299	1	711	2.30
Intercept Differences for Ethnicity	11	12	.0715	.0714	.00011	1	712	0.08
Government & Civics	1984 - 1989	Senior (Ethr	nicity = W	hite & Black;	)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1709	.1707	.00016	1	602	0.12
Sex & Ethnicity Interaction Test	2	3	.1707	.11. 7	.00199	1	603	1.45
Slope Differences for Sex	7	8	. 1632	.1631	.00007	1	606	0.05
Intercept Differences for Sex	8	ý	. 1631	.1114	.05170	1	607	37.50
Slope Differences for Ethnicity	10	11	. 1133	.1132	.00006	1	606	0.04
Intercept Differences for Ethnicity	11	12	. 1132	.1114	.00176	1	607	1.20

Table D-4. (Continued)

	Com	parison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
History 1984 - 1985	freshmen	(Ethnicity	= White,	Black & Hispan	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2156	.2144	.00123	2	1,319	1.03
Sex & Ethnicity Interaction Test	2	3	.2144	.2114	.00294	2	1,321	2.47
Slope Differences for Sex	7	8	. 2098	.2074	.00234	1	1,327	3.94
Intercept Differences for Sex	8	9	.2074	. 1300	.07740	1	1,328	129.68 **
Slope Differences for Ethnicity	10	11	. 1352	. 1315	.00363	2	1,325	2.78
Intercept Differences for Ethnicity	11	12	. 1316	. 1300	.00152	2	1,327	1.16
History 1985 - 1986	Freshinen	(Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1649	. 1628	.00214	1	1,344	3.45
Sex & Ethnicity Interaction Test	2	3	. 1654	.1653	.00011	1	1,344	0.18
Slope Differences for Sex	7	8	. 1639	. 1603	.00363	1	1,347	5.86
Intercept Differences for Sex	8	9	. 1602	.1187	.04155	1	1,348	66.69 *
Slope Differences for Ethnicity	10	11	.1218	.1217	.00005	1	1,347	0.08
Intercept Differences for Ethnicity	11	12	.1217	.1187	.00301	1	1,348	4.62
History 1984 - 1985	Sophomor	e (Ethnicity	= White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1760	.1731	.00281	1	1,431	4.87
Sex & Ethnicity Interaction Test	2	3	.1758	.1748	.00096	1	1,431	1.67
Slope Differences for Sex	7	8	.1714	. 1688	.00255	1	1,434	4.42
Intercept Differences for Sex	8	9	. 1689	.1077	.06117	1	1,435	105.61 *
Slope Differences for Ethnicity	10	11	. 1160	.1157	.00029	1	1,434	0.48
Intercept Differences for Ethnicity	11	12	.1157	.1077	.00798	1	1,435	12.96 **
History 1985 - 198	5 Sophomor	e (Ethnicity	= White,	, Black & Fisp	anic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1729	. 1665	.00636	2	1,466	5.64 *
Sex & Exhnicity Interaction Test	2	3	. 1728	. 168 •	.00442	2	1,467	3.92
Slope Differences for Sex	7	8	. 1559	.1484	.00747	1	1,473	13.04 *
Slope Differences for Ethnicity	10	11	.0742	.0917	.00251	2	1,471	2.04
Intercept Differences for Ethnicity	11	12	.0917	.0701	.02154	2	1,473	17.46 *
History 1984 - 1	985 Junior	(Ethnicity	= White 8	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2105	.2098	.00071	1	1,102	0.99
Sex & Ethnicity Interaction Test	2	3	. 2098	.2(93	.00055	1	1,103	0.77
Slope Differences for Sex	7	8	. 2043	. 1549	.00940	1	1,106	13.07 *
Slope Differences for Ethnicity	10	11	.1208	.1208	.00001	1	1,106	0.02
Intercept Differences for Ethnicity	11	12	.1208	.1041	.01662	1	1,107	20.92 •
History 1985 - 1986 Ju	nior (Eth	nnicity not te	sted)					
Slope Differences for Sex	7	8	. 1623	.1479	.01440	1	428	7.36 *
History 1985 - 1986	Junior (6	[thnicity = Wh	ite & Bla	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.0713		,00169	1	409	0.75
Intercept Differences for Ethnicity	11	12	.0696		.01441	1	410	6.35

Table D-4. (Continued)

	Cor	mparison	1	<sup>2</sup> 2				
f-Test Comparison	Full	Restricted	Fuil	Restricted	R <sup>2</sup> Change	df1	df2	F
History 1984 - 1985 Sen	ior (Et	hnicity not te	sted)				<del></del> -	
Slope Differences for Sex	7	8	.2692	. 2602	.00900	1	423	5.21
Intercept Differences for Sex	8	9	.2602	. 1990	.06124	1	424	35.09 **
History 1984 - 1985	Senior (	Etimicity = Wh	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.2479	. 2450	.00285	1	402	1.53
Intercept Differences for Ethnicity	11	12	.2450	. 2094	-03564	1	403	19.02 *
Foreign Language 1984 - 1985	freshme	n (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.1657	. 1634	.00235	ì	1,012	2.85
Intercept Differences for Sex	8	9	. 1634	.0737	-08968	1	1,013	108.58 **
foreign Language 1984 - 1985 Fr	eshmeri (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex riot	tested;	)	
Slope Differences for Ethnicity	10	11	.0799	.0792	.00070	2	1,010	0.38
Intercept Differences for Ethnicity	11	12	.0792	.0737	.00550	2	1,012	3.02
Foreign Language 1985 - 1986	Freshme	n (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.1219	.1113	.01054	1	797	9.57 *
foreign Language 1985 - 1986 Fr	eshinen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested:	)	
Slope Differences for Ethnicity	10	11	,0535	.0439	.00963	2	795	4.05
Intercept Differences for Ethnicity	11	12	.0439	.0407	.00323	2	797	1.35
foreign Language 1984 - 1985	Sophomor	e (Ethnicity	not teste	·d)				
Slope Differences for Sex	7	8	. 1555	.1424	.01310	1	892	13.84 **
Foreign Language 1984 - 1985 Sc	phomore	(Ethnicity = W	hite, Bla	ck & Hispanic	) (Sex not	Leste	d)	
Slope Differences for Ethnicity	10	11	.0401	.0303	.00982	2	890	4.55
Intercept Differences for Ethnicity	11	12	.0303	.0290	.00130	2	892	0.60
foreign Language 1985 -	1986 Sc	phomore (Ethn	icity = W	lhite & Nonwhi	te)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1310	. 1308	.00011	1	604	0.08
Sex & Ethnicity Interaction Test	2	3	.1308	. 1303	.00055	1	605	0.38
Slope Differences for Scx	7	8	.1218	.1138	.00806	1	608	5.58
Intercept Differences for Sex	8	9	.1138	.0280	.08583	1	609	58.98 *
Slope Differences for Ethnicity	10	11	.0340	.0296	.00438	1	808	2.75
Intercept Differences for Ethnicity	11	12	.0296	.0280	.00161	1	609	1.01
Foreign Language 1984 - 198	35 Junior	(Ethnicity r	not tested	1)				
Slope Differences for Sex	7	8	. 1576	. 1575	.00018	1	480	0.10
Intercept Differences for Sex	8	9	. 1575	.0333	.12418	1	481	70.89 *
Foreign Language 1984 - 1985 .	Junior (6	thnicity = Whi	te, Black	( & Hispanic)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	.0531	.0445	.00868	2	478	2.19
						_	4.0	, ,

Table D-4. (Continued)

	Com	parison	P.	2				
f-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Foreign Language 1985 - 198	6 Junior	(Ethnicity no	ot tested)					<del></del>
Slope Differences for Sex	7	8	. 1539	. 1539	.00001	1	247	0.00
Intercept Differences for Sex	8	9	. 1539	.0599	.09398	1	248	27.55
Foreign Language 1985 - 19	986 Junior	(Ethnicity =	White & H	ispanic) (Se	x not teste	(b		
Slope Differences for Ethnicity	10	1 i	.0317	.0276	.00408	1	205	0.86
Intercept Differences for Ethnicity	11	12	.0276	.0275	.00011	1	206	0.02
Foreign Language 1984 - 198	35 Senior	(Ethnicity no	ot tested)					
Slope Differences for Sex	7	8	. 1094	.1094	.00001	1	224	0.00
Intercept Differences for Sex	8	9	. 1094	.0658	.04361	1	225	11.02 *
Foreign Language 1984 - 19	985 Senior	(Ethnicity =	White & H	lispanic) (Se.	x not testi	2d)		
Slope Differences for Ethnicity	10	11	.0314	.0282	.00325	1	185	0.62
Intercept Differences for Ethnicity	11	12	.0282	.0275	.00062	1	186	0.12
Secretary & Office Education 198	35 - 1986	Junior (Ethni	city = Whi	te & Nonwhit	e) (Sex no	teste	ed)	
Slope Differences for Ethnicity	10	11	.0416	.0413	.00031	1	215	0.07
Intercept Differences for Ethnicity	11	12	.0413	.0384	.00284	1	216	0.64
Secretary & Office Education 198	34 - 1985	Senior (Ethni	city = Whi	ite & Nonwhit	e) (Sex no	t <b>te</b> ste	2d <b>)</b>	
Slope Differences for Ethnicity	10	11	.0379	.0375	.00037	1	220	0.08
Intercept Differences for Ethnicity	11	12	.0375	.0308	.00672	1	221	1.54
Typing & Word Processing 1984 -	1985 Fres	hmen (Ethnic	ity not te	ested)				
Slove Differences for Sex	7	8	.1794	.1707	.00868	1	507	5.36
Intercept Differences for Sex	8	9	. 1707	.1308	.03986	1	508	24.42 **
Typing & Word Processing 1984:	-1985 Fres	hmen (Ethnici	ty = White	e, Black & Hi	spanic) (S	ex not	tested)	
Slope Differences for Ethnicity	10	11	.1333	.1321	.00120	2	505	0.35
Intercept Differences for Ethnicity	11	12	.1321	.1308	.00126	2	507	0.37
Typing & Word Processing 1985 -	1986 Fres	hmen (Ethnic	ity not te	ested)				
Slope Differences for Sex	7	8	. 1265	.1261	.00036	1	492	0.20
Intercept Differences for Sex	8	9	.1261	.0721	.05404	1	493	30,49 **
Typing & Word Processing 1985	-1986 Fres	shmen (Ethnici	ty = White	e & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.0715	.0672	.00434	1	445	2.08
Intercept Differences for Ethnicity	11	12	.0672	.0656	.00156	1	446	0.75
Typing & Word Processing 1984 - :	1985 Sophi	omore (Ethnic	ity not to	ested)				
Slupe Differences for Sex	7	8	.1268	.1212	.00559	1	631	4.04
Intercept Differences for Sex	8	9	.1212	.0443	.07694	1	632	55.33 **
Typing & Word Processing 1984-	1985 Sophi	omore (Ethnici	ty = White	e. Black & Hi	spanic) (S	ex not	tested)	
Slope Differences for Ethnicity	10	11	.0481	.0454	.00277	2	629	0.92
							02.9	

	Con	nparison	1	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Typing & Word Processing 1985 -	1986 Sopho	omore (Ethnici	ty not t	ested)		<del></del>	<u> </u>	
Slope Differences for Sex	7	8	.1317	. 1058	.02586	1	405	12.06 **
Typing & Word Processing 1985-	1986 Sopho	omore (Ethnicit	y = Whit	e & Black) (Se	ex not test	ted)		
Slope Differences for Ethnicity	10	11	.0706	.0706	.00001	1	374	0.00
Intercept Differences for Ethnicity	11	12	.0706	.0657	. 00492	1	375	1.98
Typing & Word Processing 1984	- 1985 Jur	nior (Ethnicit	y not te	sted)				
Stope Differences for Sex	7	8	. 1728	.1627	.01006	1	391	4.76
Intercept Differences for Sex	8	9	. 1627	.0447	.11798	1	392	55.24 **
Typing & Word Processing 198	14-1985 Jui	nior (Ethnicity	/ = White	& Black) (Se.	x not teste	ed)		
Slape Differences for Ethnicity	10	11	.0484	.0484	.00000	1	359	0.00
Intercept Differences for Ethnicity	11	12	.0434	.0480	.00037	1	360	0.14
Typing & Word Processing 1985	- 1986 Jui	nior (Ethnicii	y not te	sted)				
Slope Differences for Sex	7	8	.1281	. 1146	.01341	1	221	3.40
Intercept Differences for Sex	8	9	.1147	.9441	.07052	1	223	17.68 **
Typing & Word Processing 198	35-1986 Ju	nior (Ethnicity	⁄≃ White	- & Nonwhite)	(Sex riot ti	ested)		
Slope Differences for Ethnicity	10	1!	.0835	.0691	.01437	1	221	3.47
Intercept Differences for Ethnicity	11	12	.0691	.0441	.02500	1	222	5.96
Typing & Word Processing 1984	- 1985 Se	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.1064	. 1064	.00004	1	216	0.01
Intercept Difference - for Sex	8	9	. 1064	.0546	.05175	1	217	12.57 **
Accounting/Bookkeeping 1985 -	1986 Soph	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	. 1694	.1537	.01570	1	311	5.88
Intercept Differences for Sex	8	9	.1537	. 0591	.09466	1	312	34.90 **
Accounting/Bookkeeping 1984	- 1985 Jun	ior (Ethnicit	y not tes	ited)				
Slope Differences for Sex	7	8	. 1771	.1682	.00888	1	239	2.93
Intercept Differences for Sex	8	9	. 1682	.0238	.14445	1	240	41.68
Accounting/Bookkeeping 1985	- 1986 Jun	ior (Ethnicit	y not tes	ited)				
Slope Differences for Sex	7	8	.0979	.0901	.00777	1	185	1.59
Intercept Differences for Sex	8	9	.0901	.0210	.06911	1	186	14.13 **
Accounting/Bookkeeping 1984	· 1985 Sen	ior (Ethnicit	y not tes	ited)				
Slope Differences for Sex	7	8	, 1398	. 1389	.00086	1	247	0.25
Intercept Difference, for Sex	8	9	. 1389	.0411	.09781	1	248	28.17 **
Home Economics 1984 - 198	5 freshmen	(Ethnicity n	ot tested	<b>5</b> )				
Slope Differences for Sex	7	8	. 1938	.1937	.00005	1	547	0.04
•								

Table D-4. (Continued)

	Cor	nparison		2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1984-1	985 Freshmen	(Ethnicity =	White & B	lack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1802	.1799	.00037	1	519	0.24
Intercept Differences for Ethnicity	11	12	.1799	.0990	.08085	1	520	51.26**
Home Economics 1985 - 1	986 Freshmen	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	. 1855	.1797	.00583	1	312	2.23
Intercept Differences for Sex	8	9	.1797	.0640	.11572	1	313	44.15 **
Home Economics 1985-1	986 Freshmen	(Ethnicity =	White & N	onwhite) (Sex	not tested	d)		
Slope Differences for Ethnicity	, 10	11	.0765	.0750	.00151	1	312	0.51
Intercept Differences for Ethnicity	11	12	.0750	.0640	.01100	1	313	3.72
Home Economics 1984 - 1	985 Sophonor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	. 1654	.1654	.00004	1	321	0.01
Intercept Differences for Sex	8	9	. 1654	.0636	.10175	1	322	39.26 **
Home Economics 1984-19	85 Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	. 1142	.1110	.00313	1	321	1.13
Intercept Differences for Ethnicity	11	12	. 1110	.0636	.04738	1	322	17.16**
Home Economics 1985 - 1	1986 Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	. 1363	.1348	.00159	1	394	0.73
Intercept Differences for Sca	8	9	. 1347	.0373	.09746	1	395	44.49 **
Home Economics 1985-19	986 Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	.0449	.0427	.00221	1	394	0.91
Intercept Differences for Ethnicity	11	12	.0427	.0373	.00537	1	395	2.22
Home Economics 1984 -	1985 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1080	. 1069	.00111	1	279	0.35
Intercept Differences for Sex	8	9	. 1069	.0377	.06926	1	280	21.72 **
Home Economics 1984-	1985 Junior (	Ethnicity = Wh	ite & Non	white) (Sex no	ot tested)			
Slope Differences for Ethnicity	10	11	.0515	.0502	.00126	1	279	0.37
Intercept Differences for Ethnicity	11	12	. 0502	.0377	.01256	1	280	3.70
Home Economics 1985 -	1986 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1746	.1722	.00236	1	358	1.02
Intercept Differences for Sex	8	9	. 1722	.0094	.16283	1	<b>3</b> 59	70.62 *1
Home Economics 1985-	1986 Junior (	Ethnicity = Wh	ite & Non	white) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.0276	.0220	.00054	í	358	0.20
Intercept Differences for Ethnicity	11	12	.0220	.0094	.01264	1	359	4.64
Home Economics 1984 -	1985 Senior	(Ethnicity no	ot tested)					
Slope Differences for Sex	7	8	.1447	.1443	.00038	1	318	0.14
Intercept Differences for Sex	8	9	. 1443	.0543	.09002	1	319	33.56 **

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Table 0.4. (Concluded)

	Ço	Comparison		<sub>R</sub> 2				
F-Test Comparison	Full	Restricted	Fuil	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1984-19	985 Senior	(Ethnicity = Wi	nite & No	nwhite) (Sex	not tested)	,		
Slope Differences for Ethnicity	10	11	.0572	.0547	.00245	1	318	0.83
Intercept Differences for Ethnicity	11	12	.0548	.0543	.00046	í	319	0.15
Computer Programming 1985 -	1986 Sophom	ore (Ethnicity	not tes	ted)				
Slope Differences for Sex	7	8	.1718	. 1678	.00406	1	227	1.11
Intercept Differences for Sex	8	9	. 1678	.0354	. 13239	1	228	36.27 **
Computer Programming 1984	- 1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2341	. 2340	.00003	1	240	0.01
Intercept Differences for Sex	8	9	.2340	.1298	.10421	1	241	32.79 *
Computer Programming 1985	- 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2065	.2034	.00303	1	157	0.60
Intercept Differences for Sex	8	9	.2034	.0363	.16711	1	158	33.15 *
Computer Programming 1984	- 1985 Seni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	. 1927	.1027	.00007		152	0.01
Intercept Differences for Sex	8	9	. 1027	.0936	.00909	ì	153	1.55

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

Table 0-5. F-Tests of Significance for Business & Clerical Composite

English   -		Con	parison		R <sup>2</sup>		_		
Stage   Interaction Test (ASVAB*sex*ethnicity)   1   2   2.243   .2628   .00159   2   2.422   0.	F-Test Comparison	Full	Restrict	ed Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Sex & Ethnicity Interaction Test   2   3   .2628   .2558   .00702   2   2   .2424   .114   .1045   .	English : - IV 1984 - 1	985 Fres	hmen (Et	hnicity = Whi	te, Black & H	ispanic)	<del></del>		
Consistent Over or Under prediction of Subgroup 2 42628269401345 3 2 .424 14 Slope Differences for Sex 2 52628269900192 1 2 .424 6  English I - IV 1985 - 1986 Freshmer (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAR*sex*ethnicity) 1 22121211000103 2 1 .999 1	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2634	.2628	.00059	2	2,422	0.96
English I - IV 1985 - 1986 Freshmen   CEthnicity = White, Black & Hispanic	Sex & Ethnicity Interaction Test	2	3	.2628	.2558	.00702	2	2,424	11.54 **
English I - IV 1985 - 1986 Freshmen (Ethnicity = White, Black & Hispanic)   3-way Interaction Test (ASVAR-sex*ethnicity)   1   2   .2121   .2110   .00103   2   1,989   1   5   5   5   5   5   5   5   5   5	Consistent Over or Under prediction of Subgroup	2	4	. 2628	.2494	.01345	3	2,424	14.75 **
3-way Interaction Test (ASVAB-sex*ethnicity) 1 2 3.121	Slope Differences for Sex	2	5	.2628	.2609	.00192	1	2,424	6.30
Sex & Ethnicity Interaction Test   2   3   .2110   .2071   .00391   2   1,991   4	English I - IV 1985 - 1	986 Fres	shmen (Et	hnicity = Whi	te, Black & H	ispanic)			
Siope Differences for Sex   7   8   .1849   .1845   .00033   1   1,997   0	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2121	.2110	.00103	2	1,989	1.30
Intercept Differences for Sex   8	Sex & Ethnicity Interaction Test	2	3	.2110	.2071	.00391	2	1,991	4.94 *
English   -	Slope Differences for Sex	7	8	.1849	. 1845	.00033	1	1,997	0.81
English I - IV 1984 - 1985 Sophomore (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2896 .2885 .00107 2 2.296 1 Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2896 .2885 .00107 2 2.298 1 Slope Differences for Sex 7 8 .2831 .2789 .00413 1 2.304 13 Slope Differences for Ethnicity 10 11 .2639 .2632 .00971 2 2.302 1 Intercept Differences for Ethnicity 11 12 .2632 .2605 .00971 2 2.302 1 Intercept Differences for Ethnicity 11 12 .2632 .2605 .00076 2 2.304 4  English I - IV 1985 - 1986 Sophomore (Ethnicity = White, Black & Hispanic)	Intercept Differences for Sex	8	9	.1845	. 1716	.01288	1	1,998	31.56 **
3-way Interaction Test (ASVAB*sex*ethnicity)	Slope Differences for Ethnicity	10	11	. 1892	.1793	.0990	2	1,995	12.17 **
Sex & Ethnicity Interaction Test	English ! - IV 1984 - 19	85 Sopho	omore (Et	hnicity = Whi	te, Black & H	ispanic)			
Stope Differences for Sex   7   8   .2831   .2789   .00413   1   2,304   13   13   14   2304   13   14   2305   1306   14   14   15   2637   .2632   .00971   2   2,302   14   14   14   15   15   16   15   15	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2896	. 2885	.00107	2	2,296	1.73
Slope Differences for Ethnicity	Sex & Ethnicity Interaction Test	2	3	.2885	. 2876	.00094	5	2,298	1.53
Intercept Differences for Ethnicity	Slope Differences for Sex	7	8	.2831	.2789	.00413	1	2,304	13.28 **
English I - IV 1985 - 1986 Sophomore (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2323 .2312 .2305 .00073 2 1,942 1  Sex & Ethnicity Interaction Test 2 3 .2312 .2305 .00073 2 1,944 1  Slope Differences for Sex 7 8 .2122 .2084 .00379 1 1,950 9  Intercept Differences for Sex 8 9 .2084 .1816 .02677 1 1,951 65  Slope Differences for Ethnicity 10 11 .1987 .1943 .00434 2 1,948 5  Intercept Differences for Ethnicity 11 12 .1943 .1816 .01267 2 1,950 15  English I - IV 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2407 .2404 .00025 2 1,723 0  Slope Differences for Ethnicity 10 11 .1896 .1859 .00025 2 1,723 0  Slope Differences for Ethnicity 10 11 .1896 .1859 .00372 2 1,729 12  Slope Differences for Ethnicity 11 12 .1859 .1859 .00372 2 1,729 3  Intercept Differences for Ethnicity 11 1 2 .2180 .00000 1 1,259 0  Sway Interaction Test (ASVAB*sex*ethnicity) 1 2 .2190 .2181 .00088 1 1,258 1  Sex & Ethnicity Interaction Test 2 3 .2181 .2181 .00000 1 1,259 0  Slope Differences for Sex 7 8 .2166 .2004 .00822 1 1,262 13  Slope Differences for Ethnicity 10 11 .1595 .1594 .00000 1 1,262 0  Slope Differences for Ethnicity 11 12 .1594 .1590 .00039 1 1,263 0  English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)  English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 1 2 .1594 .1590 .00039 1 1,263 0	Slope Differences for Ethnicity	10	11	. 2639	. 2632	.00071	2	2,302	1.11
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2323 .2312 .00109 2 1,942 1 Sex & Ethnicity Interaction Test 2 3 .2312 .2305 .00073 2 1,944 0 Slope Differences for Sex 7 8 .2122 .2084 .00379 1 1,950 9 Intercept Differences for Sex 8 9 .2084 .1816 .02677 1 1,951 65 Slope Differences for Ethnicity 10 11 .1987 .1943 .00434 2 1,948 5 Intercept Differences for Ethnicity 11 12 .1943 .1816 .01267 2 1,950 15  English I - IV 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2407 .2404 .00025 2 1,721 0 Sex & Ethnicity Interaction Test 2 3 .2404 .2402 .00025 2 1,723 0 Slope Differences for Ethnicity 10 11 .1896 .1859 .00372 2 1,723 0 Slope Differences for Ethnicity 10 11 .1896 .1859 .00372 2 1,727 3 Intercept Differences for Ethnicity 11 12 .1859 .1829 .00303 2 1,729 3 Intercept Differences for Ethnicity 11 2 .2190 .2181 .00088 1 1,258 1 Sex & Ethnicity Interaction Test 2 3 .2181 .2181 .00000 1 1,259 0 Slope Differences for Sex 7 8 .2166 .2004 .00822 1 1,262 1 Slope Differences for Ethnicity 10 11 .1595 .1594 .00000 1 1,269 0 Slope Differences for Ethnicity 10 11 .1595 .1594 .00000 1 1,260 1 Intercept Differences for Ethnicity 10 11 .1595 .1594 .00000 1 1,260 0 Intercept Differences for Ethnicity 10 11 .1595 .1594 .00000 1 1,262 0 Intercept Differences for Ethnicity 10 11 .1595 .1594 .00000 1 1,262 0 Intercept Differences for Ethnicity 10 11 .1595 .1594 .00000 1 1,262 0 Intercept Differences for Ethnicity 11 12 .1594 .1590 .00030 2 1,263 0	Intercept Differences for Ethnicity	11	12	.2632	. 2605	.00268	2	2,304	4.19
Sex & Ethnicity Interaction Test         2         3         .2312         .2305         .00073         2         1,944         0           Slope Differences for Sex         7         8         .2122         .2084         .00379         1         i,950         9           Intercept Differences for Sex         8         9         .2084         .1816         .02677         1         1,951         65           Slope Differences for Ethnicity         10         11         .1987         .1943         .00434         2         1,948         5           Intercept Differences for Ethnicity         11         12         .1943         .1816         .01267         2         1,950         15           English 1 - IV 1984 - 1985 Junior         (Ethnicity = White, Black & Hispanic)           English 1 - IV 1984 - 1985 Junior         (Ethnicity = White, Black & Hispanic)           Sex & Ethnicity Interaction Test         2         3         .2404         .2402         .00025         2         1,723         0           English 1 - IV 1985 - 1986 Junior         (Ethnicity = White & Black)           English 1 - IV 1985 - 1986 Junior         (Ethnicity = White & Black)           English 1 - IV 1985 - 1986 Junior	English I - IV 1985 - 19	986 Sophe	omore (Et	hnicity = Whi	te, Black & F	lispanic)			
Slope Differences for Sex   7	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2323	.2312	.00109	2	1,942	1.38
Stope Differences for Sex   7   8   .2122   .2084   .00379   1   i,950   9	Sex & Ethnicity Interaction Test	2	3	.2312	. 2305	.00073	2	1,944	0.93
Slope Differences for Ethnicity   10	Slope Differences for Sex	7	8	.2122	.2084	.00379	1	i, <b>9</b> 50	9.39 *
English   - IV 1984 - 1985 Junior   (Ethnicity = White, Black & Hispanic)	Intercept Differences for Sex	8	9	.2084	.1816	.02677	1	1,951	65.98 **
English I - IV 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity)	Slope Differences for Ethnicity	10	11	.1987	. 1943	.00434	2	1,948	5.28 *
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2407 .2404 .00025 2 1,721 .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	Intercept Differences for Ethnicity	11	12	. 1943	.1816	.01267	2	1,950	15.33 **
Sex & Ethnicity Interaction Test       2       3       .2404       .2402       .00025       2       1,723       0         Slope Differences for Sex       7       8       .2303       .2246       .00575       1       1,729       12         Slope Differences for Ethnicity       10       11       .1896       .1859       .00372       2       1,727       3         Intercept Differences for Ethnicity       11       12       .1859       .1829       .00303       2       1,729       3         English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)         English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)         3-way Interaction Test (ASVAB*sex*ethnicity)       1       2       .2190       .2181       .00088       1       1,258       1         Slope Differences for Sex       7       8       .2166       .2084       .00822       1       1,262       0         Slope Differences for Ethnicity       10       11       .1595       .1594       .00009       1       1,262       0         Interaction Test (ASVAB*sex*ethnicity)       1       2       .1898       .1862       .00360       2       1,275       2	English 1 - IV 1984 -	1985 Ju	nior (Eth	nicity = Whit	e, Black & Hi	spanic)			
Sex & Ethnicity Interaction Test       2       3       .2404       .2402       .00025       2       1,723       0         Slope Differences for Sex       7       8       .2303       .2246       .00575       1       1,729       12         Slope Differences for Ethnicity       10       11       .1896       .1859       .00372       2       1,727       3         English I - IV 1985 - 1986 Junior       (Ethnicity = White & Black)         English I - IV 1985 - 1986 Junior       (Ethnicity = White & Black)         Sway Interaction Test (ASYAB*sex*ethnicity)       1       2       .2190       .2181       .00088       1       1,258       1         Slope Differences for Sex       7       8       .2166       .2084       .00822       1       1,262       13         Slope Differences for Ethnicity       10       11       .1595       .1594       .00009       1       1,262       0         Intercept Differences for Ethnicity       11       12       .1594       .1590       .00039       1       1,263       0         English I - IV 1984 - 1985 Senior       (Ethnicity = White, Black & Hispanic)         English I - IV 1984 - 1985 Senior       (Ethn	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2407	.2404	.00025	2	1,721	0.28
Slope Differences for Sex 7 8 .2303 .2246 .00575 1 1,729 12 Slope Differences for Ethnicity 10 11 .1896 .1859 .00372 2 1,727 3 Intercept Differences for Ethnicity 11 12 .1859 .1829 .00303 2 1,729 3    English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)  S-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2190 .2181 .00088 1 1,258 1   Sex & Ethnicity Interaction Test 2 3 .2181 .2181 .00000 1 1,259 0   Slope Differences for Sex 7 8 .2166 .2084 .00822 1 1,262 13   Slope Differences for Ethnicity 10 11 .1595 .1594 .00009 1 1,262 0   Intercept Differences for Ethnicity 11 12 .1594 .1590 .00039 1 1,263 0    English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)  English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1898 .1862 .00360 2 1,275 2	•	2	3	.2404	.2402	.00025	2	1,723	0.28
Slope Differences for Ethnicity	•	7	8	.2303	.2246	.00575	1	1,729	12.92 **
English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)  3-way Interaction Test (ASVAB*sex*ethnicity)	•	10	11	. 1896	. 1859	.00372	2	1,727	3.96
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2190 .2181 .00088 1 1,258 1 Sex & Ethnicity Interaction Test 2 3 .2181 .2181 .00000 1 1,259 0 Slope Differences for Sex 7 8 .2166 .2084 .00822 1 1,262 13 Slope Differences for Ethnicity 10 11 .1595 .1594 .00009 1 1,262 0 Intercept Differences for Ethnicity 11 12 .1594 .1590 .00039 1 1,263 0 English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)	•	11	12	. 1859	. 1829	.00303	2	1,729	3.22
Sex & Ethnicity Interaction Test       2       3       .2181       .2181       .00000       1       1,259       0         Slope Differences for Sex       7       8       .2166       .2084       .00822       1       1,262       13         Slope Differences for Ethnicity       10       11       .1595       .1594       .00009       1       1,262       0         Intercept Differences for Ethnicity       11       12       .1594       .1590       .00039       1       1,263       0         English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)         3-Way Interaction Test (ASVAB*sex*ethnicity)       1       2       .1898       .1862       .00360       2       1,275       2	English 1 - 1V 1985 -	1986 Ju	nior (Eth	nicity = Whi	te & Brack)				
Sex & Ethnicity Interaction Test       2       3       .2181       .2181       .00000       1       1,259       0         Slope Differences for Sex       7       8       .2166       .2084       .00822       1       1,262       13         Slope Differences for Ethnicity       10       11       .1595       .1594       .00009       1       1,262       0         Intercept Differences for Ethnicity       11       12       .1594       .1590       .00039       1       1,263       0         English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)         3-way Interaction Test (ASVAB*sex*ethnicity)       1       2       .1898       .1862       .00360       2       1,275       2	3-way Interaction Test (ASYAB*sex*ethnicity)	1	2	.2190	.2181	.00088	1	1,258	1.42
Slope Differences for Sex       7       8       .2166       .2084       .00822       1       1,262       13         Slope Differences for Ethnicity       10       11       .1595       .1594       .00009       1       1,262       0         Intercept Differences for Ethnicity       11       12       .1594       .1590       .00039       1       1,263       0         English I - IV 1984 - 1985 Senior       (Ethnicity = White, Black & Hispanic)         3-way Interaction Test (ASVAB*sex*ethnicity)       1       2       .1898       .1862       .00360       2       1,275       2									0.00
Slope Differences for Ethnicity       10       11       .1595       .1594       .00009       1       1,262       0         Intercept Differences for Ethnicity       11       12       .1594       .1590       .00039       1       1,263       0         English I - IV 1984 - 1985 Senior       (Ethnicity = White, Black & Hispanic)         3-way Interaction Test (ASVAB*sex*ethnicity)       1       2       .1898       .1862       .00360       2       1,275       2	-						1		13.24 **
Intercept Differences for Ethnicity 11 12 .1594 .1590 .00039 1 1,263 0  English I - IV 1984 - 1985 Senior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1898 .1862 .00360 2 1,275 2	•								0.14
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1898 .1862 .00360 2 1,275 2	•		12				1		0.59
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1898 .1862 .00360 2 1,275 2	Enalish ! - 1v 1984 -	1985 Se	nior (Eth	nnicity = Whi	te, Black & H	ıspani <b>c)</b>			
· · · · · · · · · · · · · · · · · · ·	_						2	1,275	2.83
Sex & Ethnicity Interaction Test 2 3 .1862 .1860 .00020 2 1,277 0	Sex & Ethnicity Interaction Test	2	3		.1860	.00020	2	1,277	0.16
•••	·								5.47
· · · · · · · · · · · · · · · · · · ·	•								21.97 **
	•								2.84
-1	•								1.65

Table D-5. (Continued)

	Cor	mparison	ş	2				
f-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Math 1984 - 19	85 Fresi	nmen (Ethnicit	y = Wiite	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1136	.1119	.00170	2	1,167	1.12
Sex & Ethnicity Interaction Test	2	3	.1119	.1091	.00278	2	1,169	1.83
Slope Differences for Sex	7	8	.1063	.1061	.00015	1	1,175	G.19
Intercept Differences for Sex	8	9	.1061	.1053	.00082	1	1,176	1.08
Slope Differences for Ethnicity	10	11	.1080	.1067	.00130	2	1,173	0.85
Intercept Differences for Ethnicity	11	12	.1067	.1053	.00139	2	1,175	0.91
General Math 1985 - 19	86 Fresi	hinen (Ethnicit	y = White	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0452	.0452	.00002	1	549	0.01
Sex & Ethnicity Interaction Test	2	3	.0452	.0415	.00374	1	550	2.16
Slope Differences for Sex	7	8	.0385	.0363	.00221	1	553	1.27
Intercept Differences for Sex	8	9	.0363	.0347	.00159	1	554	0.91
Stope Differences for Ethnicity	10	11	.0376	.0348	.00278	1	553	1 60
Intercept Differences for Ethnicity	11	12	.0348	.0347	,00004	1	554	0.03
General Math 1984 - 19	785 Soph	onore (Ethnici	ty = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1209	.1134	.00753	2	736	3.15
Sex & Ethnicity Interaction Test	2.	3	. 1134	.1099	.00348	2	738	1.45
Slope Differences for Sex	7	8	.1084	.1079	.00051	1	744	0.43
Intercept Differences for Sex	8	9	.1079	.1079	.00005	1	745	0.04
Slope Differences for Ethnicity	10	11	.1093	.1091	.00023	?	742	U.10
Intercept Differences for Ethnicity	11	12	.1091	.1079	. 30121	2	744	0.50
General Math 1985 - 19	986 Soph	omore (Ethnici	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1076	.1674	.00017	1	305	0.06
Sex & Ethnicity Interaction Test	2	3	.1074	.1042	.00319	1	306	1.09
Slope Differences for Sex	7	8	.0817	.0814	.00023	1	309	0.08
Intercept Differences for Sex	8	9	.0814	.0587	.02274	1	310	7.67
Slope Differences for Ethnicity	10	11	.0795	.0794	.00010	1	309	0.03
Intercept Differences for Ethnicity	11	12	.0794	.0587	.02072	1	310	6.98
General Math 1984 -	1985 Jun	ior (Ethnicity	y = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0741	.0738	.00037	1	266	0.11
Sex & Ethnicity Interaction Test	2	3	.0738	.0734	.00040	1	267	0.11
Slope Differences for Sex	7	8	.0635	.0633	.00019	1	270	0.05
Intercept Differences for Sex	8	9	.0633	.0464	.01689	1	271	4.89
Stope Differences for Ethnicity	10	11	.0545	.0543	.00014	1	270	0.04
Intercept Differences for Ethnicity	11	12	.0543	.0464	.00789	1	271	2.26
General Math 1985 - 1986	Junior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1045	.1044	.00062	1	222	0.00
Intercept Differences for Sex	8	9	.1044	.0721	.01231	1	223	3.06
General Math 1985 - 1986	Junior	(Ethnicity = W	hite & Bl	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1317	,1316	.00008	1	195	0.02

<u>Table D-5</u>. (Continued)

	Co	mparison		R <sup>2</sup>		-		
f-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Hoth 1984 - 1985	Senior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.0638	.0637	.00006	1	230	0.01
Intercept Differences for Sex	8	9	.0637	. 0635	.00021	1	231	0.05
General Math 1984 - 198	5 Senior	(Ethnicity = 1	⊌hite & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	. 1083	.1074	.00084	1	203	0.19
Intercept Differences for Ethnicity	11	12	. 1074	.0654	.04202	1	204	9.60 *
Algebra 1984 - 1985	Freshme	en (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2054	.2045	.00092	1	1,180	1.37
Sex & Ethnicity Interaction Test	2	3	. 2045	.2044	.00007	1	1,181	0.11
Slope Differences for Sex	7	8	.2037	.2028	.00083	1	1,184	1.23
Intercept Differences for Sex	8	9	.2028	. 1875	.01536	1	1,185	22.83 **
Slope Differences for Ethnicity	10	11	. 1895	. 1885	.00102	1	1,184	1.49
Intercept Differences for Ethnicity	11	12	. 1885	. 1875	.00103	1	1,185	1.51
Algebra 1985 - 1986	Freshme	n (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2042	.2036	.00066	1	708	0.59
Sex & Ethnicity Interaction Test	2	3	. 2036	. 2023	.00123	1	709	1.10
Slope Differences for Sex	7	8	. 1813	. 1808	.00048	1	712	0.42
Intercept Differences for Sex	8	9	.1808	.1663	.01458	1	713	12.69 *
Slope Differences for Ethnicity	10	11	. 1845	. 1798	.00470	1	712	4.10
Intercept Differences for Ethricity	11	12	. 1798	. 1663	.01356	1	713	11.78 *
Atgebra 1984 · 1985	Sophom	ore (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	, 1720	.1720	.00000	1	871	3.00
Sex & Ethnicity Interaction Test	2	3	.1720	.1650	.00704	1	872	7.42 *
Slope Difference; for Sex	7	8	.1648	. 1575	.00727	1	875	7.62 *
Intercept Differences for Sex	8	9	.1575	. 1521	.00544	1	876	5.66
Slope Differences for Ethnicity	10	11	.1524	.1524	.00002	1	875	0.02
Intercept Differences for Ethnicity	11	12	.1523	.1520	.00030	1	876	0.31
Algebra 1985 - 1986	S Sooton	ore (Ethnicity	- Uhite	& Monwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1398	.1397	.00015	1	617	0.11
Sex & Ethnicity Interaction Test	2	3	.1397	.1371	.00259	1	618	1.86
Slope Differences for Sex	7	8	.1276	.1269	.00068	1	621	0.48
Intercept Differences for Sex	8	9	.1269	.1237	.00321	1	622	2.29
Slope Differences for Ethnicity	10	11	.1314	.1294	.00321	•	621	1.40
Intercept Differences for Ethnicity	11	12	.1294	.1237	.00568	1	622	4.06
Algebra 1984 - 1	ORS iuni	or (Ethnicity	= White S	i Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2158	.2157	.00000	1	489	0.03
Sex & Ethnicity Interaction Test	2	3	.2157	.2132	.00252	;	490	1.57
Slope Differences for Sex	7	8	. 1984	.1967	.00232	i	490	1.05
Intercept Differences for Sex	, ვ	9	. 1967	.1860	.01067	1	494	6.56
Slope Differences for Ethnicity	10	11	.2009	.1882	.01007	1	493	7.80 *
stope strict chees for elimitary	. 3	• • • • • • • • • • • • • • • • • • • •	. 2007	.1860	.00225	•	494	1.37

<u>Table D-5</u>. (Continued)

		Cor	mparison	,	2				
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfj	df2	F
Al	gebra 1985 - 1986	Junior (Etl	hnicity not te	sted)		· · · · · · · · · · · · · · · · · · ·			
Slope Difterences for Sex	-	7	8	.1453	.1388	.00647	1	273	2.07
Intercept Differences for	Sex	8	9	.1388	.1380	.00082	1	274	0.26
A	lgebra 1985 - 198	6 Junior (Et	hnicity = White	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for Ethn	icity	10	11	.1618	.1440	.01785	1	273	5.82
Intercept Differences for	Ethnicity	11	12	. 1440	.1380	.00601	1	274	1.92
Al	gebra 1984 - 1985	Senior (Et	hnicity not te	sted)					
Slope Differences for Sex		7	8	.1317	.1260	.00574	1	265	1.75
Intercept Differences for	Sex	8	9	.1260	.1053	. 02065	1	266	6.28
A	tgebra 1984 - 198	5 Senior (Et	hnicity = Whit	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for Ethn	-	10	11	.1216	. 1095	.01214	1	265	3.66
Intercept Differences for		11	12	. 1095	.1053	.00414	1	266	1.24
Geo	metry 1985 - 1986	Freshmen (	Ethnicity not	tested)					
Slope Differences for Sex		7	8	.2084	.2072	.00112	1	511	0.73
Intercept Differences for	Sex	3	9	.2072	. 2071	. 00008	1	512	0.05
Goomet	ry 1985 - 1986 Fr	eshmen (Ethn	icity = White	Black &	Hispanic) (Se	x not test	٠ <b>٠</b> ، ١		
Slope Differences for Ethn	•	10	11	.2149	,2136	. ũũ 12o	2	509	0.41
Intercept Differences for		11	12	.2136	.2071	.00649	2	511	2.11
Georg	etry 1984 - 1985	Sanhamare (	Finicity nat	tested)					
Slope Differences for Sex	1755	7	8	.1684	. 1658	.00264	1	561	1.78
Intercept Differences for	Sex	8	9	.1558	, 1557	.00004	1	562	0.02
Cacmot	ery 1984 – 1985 Sc	ophomore (Eth	nicity = White	Black &	. Hisnanic \ (S	ex not tes	ted)		
Slope Differences for Ethn		10	11	.1696	.1661	.00346	2	559	1.17
Intercept Differences for		11	12	.1661	.1657	.000/0	2	561	0.13
C	1005 1006	Carbanas (	Cabalalas, asa	• • • • • • • • • •					
Slope Differences for Sex	≁ctry 1985 - 1986	Sopromore (	Ethnisity not	.1797	. 1797	.00000	1	410	0.00
Intercept Differences for	Sex	8	9	. 1797	.1782	.00151	1	411	0.76
The creation of the control of the c		J	•	• • • • •	******				00
	Geometry 1985 - 19		•						
Slope Differences for Ethr	nicity	10	11	. 2464	.2117	. 03468	1	371	17.08 *
Ge	cometry 1984 - 198	35 Junior (E	thnicity not t	ested,					
Slope Differences for Sex		7	8	. 1458	.1429	.00296	1	305	1.06
Intercept Differences for	Scx	8	9	. 1429	. 1392	.00372	1	306	1.33
(	Geometry 1984 - 19	985 Junior (E	thnicity = Wni	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethr	nicity	10	11	.1448	. 1392	.00562	1	305	2.00
Intercept Differences for		11							0.00

Table 0-5. (Continued)

	Cor	mparison		, <sup>2</sup>				
st Comparison	full	Restricted	Ful (	Restricted	R <sup>2</sup> Change	df <sub>1</sub>	df2	f
Geometry 1985 - 1986 Jun	ior (E	thnicity not t	ested)	· <del></del>				
e Differences for Sex	7	8	.1178	.1175	.00033	1	123	0.05
rcept Differences for Sex	8	Ģ	.1175	.1175	.00000	1	124	0.00
Geometry 1985 - 1986 Ju	nior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
€ Differences for Ethnicity	10	11	.3033	.2405	. 06284	1	123	11.09
Geometry 1984 - 1985 Sen	ior (E	thnicity not t	ested)					
e Differences for Sex	7	8	.1894	.1809	.00848	1	107	1.12
rcopt Differences for Sex	3	9	.1809	.1710	.00992	1	108	1.31
Geometry 1984 - 1985 Se	niur (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
e Differences for Ethnicity	10	11	.2160	.2036	.01239	1	107	1.69
rcept Differences for Ethnicity	11	12	. 2036	.1710	.03266	1	108	4.43
Calculus 1985 · 1986 Jun	ior (E	thnicity not 1	ested)					
e Differences for Sex	7	8	.0936	.0832	.01044	1	147	1.69
rcept Differences for Sex	8	9	.0832	.0750	.00815	1	148	1.32
General Science 1984 - 1	985 fre	shmen (Ethnic	:ity = ₩hi	te, Black & H	(spanic)			
y Interaction Test (ASVAB*sex*ethnicity)	1	2	.2676	.2650	.00261	2	1,956	3.48
& Ethnicity Interaction Test	?	3	. 2650	. 2556	.00938	2	1,958	12.50
istent Over or Under prediction of Subgroup	2	4	. 2650	.2578	.00718	3	1,958	6.38
e Differences for Sex	2	5	.2650	. 2649	.00099	1	1,958	0.24
General Science 1985 - 1986	Freshme	n (Ethnicity	not teste	d)				
e Differences for Sex	7	8	.1071	. 1037	.00340	1	274	1.04
rcept Differences for Sex	8	9	.1037	. 1025	.00120	1	275	0.37
General Science 1985 - 198	6 Fresh	men (Ethnicit	y = White	& Black) (Sex	not teste	d)		
e Differences for Ethnicity	10	11	.1405	. 1047	.03580	1	240	10.00
General Science 1984 - 1	985 Sop	homorė (Ethn	icity = Wh	ite & Nonwhit	e)			
y Interaction Test (ASVAB*sex*ethnicity)	1	2	.2765	. 2599	.00063	1	341	0.29
& Ethnicity Interaction Test	2	3	.2699	. 2538	.01606	1	342	7.52
e Differences for Sex	7	8	.2426	. 2383	.00434	1	345	1.98
rcept Differences for Sex	8	9	.2383	. 2287	.00956	1	346	4.34
e Differences for Ethnicity	10	11	.2433	. 2390	.00427	1	345	1.95
rcept Differences for Ethnicity	11	12	.2390	. 2287	.01032	1	346	4.69
General Science 1985 - 1986 s	ophonor	e (Ethnicity	not teste	d)				
e Differences for Sex	7	8	. 1232	. 1232	.05001	1	183	0.00
rcept Differences for Sex	8	9	.1232	.1118	.01140	1	184	2.39
Grneral Science 1985 - 1986	Sophon	ore (Ethnicit	/= White	& Black) (Sex	not teste	d)		
e Differences for Ethnicity	10	11	.2002	. 1907	.00956	1	158	1.89
rcept Differences for Ethnicity	11	12	.1907	. 1361	.05459	1	159	10.72

	Co	mparison	1	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfį	df2	F
General Science 1984 - 198	5 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.0896	.0840	.00565	1	174	1.08
Intercept Differences for Sex	8	9	.0840	.0746	.00938	1	175	1.79
General Science 1984 -	1985 Juni	or (Ethnicity	= White &	Black) (Sex	not tested)	)		
Slope Differences for Ethnicity	10	11	. 1697	.1691	.00058	1	149	0.10
Intercept Differences for Ethnicity	11	12	. 1691	.0866	.08243	1	150	14.88 *1
General Science 1985 - 198	6 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1848	.1782	.00660	1	258	2.09
Intercept Differences for Sex	8	9	. 1782	.1766	.00169	1	259	0.53
General Science 1985 - 19	956 Junior	(Ethnicity =	White & N	onwhite) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	. 2079	.1829	.02493	1	258	8.12 *
General Science 1984 - 198	35 Senior	(Ethnicity no	t tested)					
Stope Differences for Sex	7	8	.0723	.0721	.00018	1	182	0.03
Intercept Differences for Sex	8	9	.0721	.0604	.01171	1	183	2.31
Biology I - II 1 <del>5</del> 84 - 1985	Freshmer	n (Ethnicity n	ot tested	i <b>)</b>				
Slope Differences for Sex	7	8	. 2172	.2170	.00022	1	299	0.09
Intercept Differences for Sex	8	9	.2170	.2145	.00247	1	300	0.95
Biology I - 11 1984 - 198	35 Freshm	en (Ethnicity =	White &	Nonwhite) (Sc	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2170	.2158	.00126	1	299	0.48
Intercept Differences for Ethnicity	11	12	.2158	.2145	.00126	1	300	0.48
Biology 1 - 11 1985	- <b>19</b> 86 Fra	eshmen (Ethnic	ity = ₩hi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1820	.1800	.00197	1	1,119	2.69
Sex & Ethnicity Interaction Test	2	3	.1800	. 1799	.00012	1	1,120	0.17
Slope Differences for Sex	7	8	.1716	.1704	.00116	1	1,123	1.57
Intercept Differences for Sex	8	9	.1704	. 1616	.00884	1	1,124	11.98 *
Slope Differences for Ethnicity	10	11	.1689	. 1620	.00690	1	1,123	9.32 *
Intercept Differences for Ethnicity	11	12	.1620	. 1616	.00040	1	1,124	0.54
Biology I - II 1984 -	1985 Sop	homore (Ethnic	:ity = ⊌hi	ite, Black & F	Hispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2489	. 2483	.00053	2	1,371	0.49
Sex & Ethnicity Interaction Test	2	3	.2483	. 2415	.00684	2	1,373	6.24 *
Slope Differences for Sex	7	8	.2301	. 2284	.00166	1	1,379	2.97
Intercept Differences for Sex	8	9	.2284	.2257	.00275	1	1,380	4.92
Slope Differences for Ethnicity	10	11	.2374	. 2322	.00515	2	1,377	4.65 *
Intercept Differences for Ethnicity	11	12	.2322	.2257	.00653	2	1,379	5.86 *
<b>B</b> iology I - II 1985 - 198	6 Sophomo	re (Ethnicity	not teste	ed)				
Stope Differences for Sex	7	8	.2543	. 2467	,00755	1	335	3.39
Intercept Differences for Sex	8	9	.2467	.2206	.02611	1	336	11.64 *

	Cor	mparison	R	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Biology I - 11 1985 - 1986 Sopt	nomore (	Ethnicity = Whi	ite, Black	& Hispanic)	(Sex not	tested)		
Slope Differences for Ethnicity	10	11	. 2324	.2240	.00836	2	333	1.81
Intercept Differences for Ethnicity	11	12	.2240	.2206	.00340	2	335	0.73
Biology 1 - 11 1984 -	1985 Ju	nior (Ethnicii	ty = White	e & Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2423	.2415	.00081	1	397	0.43
Sex & Ethnicity Interaction Test	2	3	.2415	.2364	.00511	1	398	2.68
Slope Differences for Sex	7	8	. 2205	.2188	.00171	1	401	0.88
Intercept Differences for Sex	8	9	.2188	.2123	.00650	1	402	3.34
Slope Differences for Ethnicity	10	11	.2269	.2125	.01437	1	401	7.45 *
Intercept Differences for Ethnicity	11	12	. 2125	.2123	.00023	1	402	0.12
Biology I - I! 1985 - 1986	Junior	(Ethnicity no	t tested)					
Stope Differences for Sex	7	8	.3878	.3611	.02873	1	147	6.92 *
Biology 1 - 11 1984 - 1985	Servior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.3017	.2993	.00238	1	195	0.66
Intercept Differences for Ser	8	0	.2993	.2911	.00822	1	196	2.30
Biology I - I! 1984 - 198 Slope Differences for Ethnicity	85 Senio 10	r (Ethnicity = 11	White & E	3680 (Sex n	ot tested) .00183	1	176	0.51
Intercept Differences for Ethnicity	11	12	.3580	.306/	.06123	1	177	17.15 **
Chemistry I - 11 1985 - 1986	freshme	n (Ethnicity)	not tested	d)				
Slope Differences for Sex	7	8	.2263	.2243	.00205	1	128	0.34
Intercept Differences for Sex	8	9	.2243	.2162	80800.	1	129	1.34
Chemistry I - 11 1984 - 1985	Sephonor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.0946	.0738	.02084	1	168	3.87
Intercept Differences for Sex	8	9	.0738	.0643	.00951	1	169	1.73
Chemistry 1 - 11 1985 - 1986	Coop out	a (Ethnicity	not tester	d)				
Slope Differences for Sex	7 7	8	.1354	.1331	.00233	1	430	1.16
Intercept Differences for Sex	8	9	.1331	.1139	.01920	1	431	9.55 •
21		45.1						
Chemistry 1 - 11 1984 - 198					00700			
Slope Differences for Sex	7	8	.2021	, 1990	,00309	1	426	1.65
Intercept Differences for Sex	8	9	.1990	.1772	.02182	1	427	11.63 *
Chemistry 1 - 11 1984 - 19	85 Junio	or (Ethnicity =	White &			(ප්)		
Slope Differences for Ethnicity	10	11	.2199	. 1927	.02721	1	426	14.86 *
Chemistry 1 - 11 1985 - 198	6 Junior	(Ethnicity n	ot tested	)				
Chemistry 1 - 11 1985 - 198 Slope Differences for Sex	6 Junior 7	(Ethnicity n 8	ot tested .1556	) .1554	.00017	1	13/	0.03

<u>Table 0-5</u>. (Continued)

	Com	parison		2			df2	
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1		f
Chemistry I - II 1985 -	1986 Junior	(Ethnicity =	White & I	Nonwhite) (Se	x not teste	-d)		
Slope Differences for Ethnicity	10	11	.1277	.1229	.00486	1	137	0.76
Intercept Differences for Ethnicity	11	12	.1229	.1197	.00318	1	138	0.50
Chemistry 1 - 11 1984 - 19	985 Senior	(Ethnicity r	not tested	)				
Clope Differences for Sex	7	8	.2054	.2044	.00099	1	156	0.19
ntercept Differences for Sex	8	9	.2044	.2011	.00333	1	157	0.66
Chemistry 1 - II 1984 -	1985 Senior	(Ethnicity =	: White & I	Nonwhite) (Se:	x not teste	:d)		
Giope Differences for Ethnicity	10	11	.2243	.2014	.02293	1	156	4.61
ntercept Differences for Ethnicity	11	12	.2014	.2011	.00^30	1	157	0.06
Physics 1 - 11 1985 - 198	86 Junior	(Ethnicity no	ot tested)					
lope Differences for Sex	7	8	.1694	. 1568	.01262	1	232	3.52
intercept Differences for Sex	8	9	.1565	.1401	.01672	1	233	4.62
Physics I - 11 1984 - 19	85 Senior	(Ethnicity no	ot tested)					
lope Differences for Sex	1	8	.1391	. 1369	.00221	1	166	0.43
ntercept Differences for Sex	8	9	.1369	. 1219	.01498	1	167	2.90
Government & Civics 1984 -	1985 Freshn	en (Ethnicii	ty not tes	ted)				
Slope Differences for Sex	7	8	.2742	.2/42	.000 <b>01</b>	1	344	0.00
intercept Differences for Sex	8	9	.2742	.2742	.00006	1	345	0.03
Government & Civics 1984 - 1	985 Sophomo	ore (Ethnici)	ly not tes	ted)				
Slope Differences for Sex	7	8	.2035	. 1896	.01384	1	155	2.69
Intercept Differences for Sex	8	ý	. 1896	. 1752	.01447	1	15ú	2.79
Government & Civics 1985 - 1	986 Sophomo	or <b>e</b> (Ethnici:	ty not les	ted)				
Slope Differences for Sex	7	8	.2073	.1980	.00929	1	417	4.89
rivercept Differences for Sex	8	ý	.1980	.1902	.00779	1	418	4.96
Government & Civics 1985 -	1986 \$ophor	nore (Ethnici	ty = White	& Hispanic)	(Sex not te	ested)		
Slope Differences for Ethnicity	10	11	.2348	.2345	-00032	1	388	0.16
ntercept Differences for Ethnicity	11	12	.2345	.2153	.01924	1	389	9.78
Government & Civics 1984 -	1985 Junior	(Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2377	. 2368	.00092	1	456	0.55
ntercept Differences for Sex	8	9	.2368	.2342	.00262	1	457	1.57
Government & Civics 1984	1985 Junio	or (Ethnicity	= White &	Nonwhite) (S	ex not tes	ted)		
Slope Differences for Ethnicity	10	11	.2509	.2455	.00540	1	456	3.29
Intercept Differences for Ethnicity	11	12	.2455	. 2342	.01137	1	457	6.88

Table D-5. (Continued)

	Cor	mparison	1	R <sup>2</sup>				
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Government & Civics 1985	- 1986	Junior (Ethni	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2503	. 2477	.00256	1	707	2.41
Sex & Ethnicity Interaction Test	2	3	2477	. 2479	, (10074	1	708	0.69
Slope Differences for Sex	7	8	. 2351	. 2345	.00055	1	711	0.51
Intercept Differences for Sex	8	9	.2345	.2279	.00668	1	712	6.21
Slope Differences for Ethnicity	10	11	. 2394	. 2279	.01154	1	711	10.79 *
Intercept Differences for Ethnicity	11	12	. 2279	.2279	.00001	1	712	0.01
Government & Civics 1984	- 1985	Senior (Ethn	icity = W	hite & Black)				
3-way Interaction lest (ASVAB*sex*ethnicity)	1	2	. 2295	.2295	.00003	1	602	0.02
Sex & Ethnicity Interaction Test	2	3	. 2295	.2295	.00000	1	603	0.00
Slope Differences for Sex	7	8	. 2268	. 2267	.00015	1	606	0.12
Intercept Differences for Sex	8	9	. 2267	.2257	.00096	1	607	0.75
Slope Differences for Ethnicity	10	11	.2286	. 2266	.00200	1	606	1.57
Intercept Differences for Ethnicity	11	12	.2266	.2257	.00092	1	607	0.72
History 1984 - 1985	Fireshme	n (Ethnicity	= White,	Black & Rispa	riic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	ટ	. 2597	.2593	.00036	2	1,319	0.32
Sex & Ethnicity Interaction Test	2	3	. 2593	. 2549	.00445	2	1,321	3.96
Slope Differences for Sex	7	8	. 2389	.2389	.00001	1	1,327	0.01
Intercept Differences for Sex	8	9	.2389	.2309	.00800	1	1,328	13.96 *
Slope Differences for Ethnicity	10	11	. 2443	.2327	.01155	2	1,325	10.13 *
History 1985 - 1986	Freshme	n (Ethnicity	= White &	· Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2647	.2647	.00000	1	1,343	0.00
Sex & Ethnicity Interaction Test	2	3	.2647	.2647	.00002	1	1,344	0.03
Slope Differences for Sex	7	8	. 2602	. 2602	.00001	1	1,347	0.01
Intercept Differences for Sex	8	9	.260?	.2601	.00012	1	1,348	0.21
Slope Differences for Ethnicity	10	11	.2645	.2605	.00389	1	1,347	7.12 *
Intercept Differences for Ethnicity	11	12	. 2696	.2601	. 00052	1	1,348	0.94
History 1984 - 1985	Sophomo	ore (Ethnicity	= White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2809	.2807	.00028	1	1,430	0.56
Sex & Ethnicity Interaction Test	2	3	.2806	.2783	.00239	1	1,431	4.75
Slope Differences for Sex	7	8	. 2755	.2754	.00011	1	1,434	0.21
Intercept Differences for Sex	8	9	. 2754	.2740	.00147	1	1,435	2.91
Slope Differences for Ethnicity	10	11	.2763	. 2758	.00056	1	1,434	1.10
Intercept Differences for Ethnicity	11	12	. 2758	.2740	.00182	1	1,435	3.61
History 1985 - 1986	Sephono	ore (Ethnicity	= White,	, Black & Hisp	anic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2156	.2151	.00046	2	1,465	0.43
Sex & Ethnicity Interaction Test	2	3	.2151	.2080	.00710	2	1,467	6.63 *
Slope Differences for Sex	7	8	.1776	. 1773	.00032	1	1,473	0.58
Intercept Differences for Sex	8	9	. 1773	. 1625	.01473	1	1,474	26.39 *
Slope Differences for Ethnicity	10	11	. 1924	.1758	.01660	2	1,471	15.12 *

<u>Table D-5</u>. (Continued)

	Соп	parison	- 1	<sup>8</sup> S				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfi	df2	F
History 1984 - 19	85 Junior	(Ethnicity =	White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2989	. 2987	.00020	1	1,102	0.32
Sex & Ethnicity Interaction Test	2	3	.2987	.2974	.00133	1	1,103	2.10
Stope Differences for Sex	7	8	.2844	.2862	.00026	1	1,106	0.40
Intercept Differences for Sex	8	9	.2862	.2787	.00748	1	1,107	11.60 **
Slope Differences for Ethnicity	10	11	. 2884	.2861	.00235	1	1,106	3.66
Intercept Differences for Ethnicity	11	12	.2861	.2787	.00736	1	1,107	11.42 **
History 1985 - 1986 Jur	nior (Eth	nicity not te	sted)					
Slope Differences for Sex	7	8	.2447	.2313	-01346	1	428	7.62 *
History 1985 - 1986	Junior (E	thnicity = Wh	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.2254	.2236	.00180	1	409	0.95
Intercept Differences for Ethnicity	11	12	. 2236	.2175	.00610	1	410	3.22
History 1984 - 1985 Ser	nior (Eth	nnicity not te	sted)					
Slope Differences for Sex	7	8	.3308	.3294	.00139	1	423	0.88
Intercept Differences for Sex	8	9	.3294	.3294	.00001	1	424	0.01
History 1984 - 1985	Senior (E	thnicity = Wh	ite & Bla	ick) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.3742	.3709	.00326	1	402	2.09
Intercept Differences for Ethnicity	11	12	.3709	.3454	.02551	1	493	16.34
Foreign Language 1984 - 198	5 Freshmer	n (Ethraicity	not testa	ed)				
Slope Differences for Sex	7	8	.2796	.2793	.00030	1	1,012	0.43
intercept Differences for Sex	8	9	. 2793	.2558	. 0235 1	1	1,013	33.04 **
Foreign Language 1984 - 1985 F	reshmen (i	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	1)	
Slope Differences for Ethnicity	10	1!	.2838	.2735	.01033	2	1,010	7.28 *
Foreign Language 1985 - 198	6 freshme	n (Ethnicity	not teste	ed)				
Stope Differences for Sex	7	8	.1866	. 1855	.00112	1	797	1.10
Intercept Differences for Sex	8	9	. 1855	. 1615	.02401	1	798	23.52 *
Foreign Language 1985 - 1986 F	reshmen (	Ethnicity = Wh	ite, Blac	ck & Hispanic	(Sex not	testec	3)	
Slope Differences for Ethnicity	10	11	.1691	. 1682	.00097	2	795	0.46
Intercept Differences for Ethnicity	11	12	.1682	. 1615	.00667	2	797	3.19
foreign Language 1984 - 1985	Sophomor	e (Ethnicity	not leste	ed)				
Slope Differences for Sex	-	8	.2250	. 2245	.00043	1	892	0.49
Intercept Differences for Sex	U	9	.2245	. 1780	.04655	1	893	53.61 *
Foreign (language 1984 - 1985 S	ophomore	(Ethnicity = W	ihito, Bla	ack & Hispan-	:) (Sex not	testo	: <b>1</b> )	
Slope Differences for Ethnicity	10	11	.1912	. 1892	.00303	2	890	1.65
Intercept Differences for Ethnicity	11	12	.1882	.17 <b>3</b> 9	.01026	2	592	5.64 *

Table 0-5. (Continued)

	Con	nparison		<sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Foreign Language 1985 -	1986 Sop	phomore (Ethn	icity = W	hite & Nonwhi	te)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1743	. 1742	.00010	1	604	0.07
Sex & Ethnicity Interaction Test	2	3	.1742	. 1741	.00004	1	605	0.03
Slope Differences for Sex	7	8	.1641	. 1637	.00043	1	603	0.3;
Intercept Differences for Sex	8	9	.1637	.1320	.03174	1	609	23.11 **
Slope Differences for Ethnicity	10	11	.1461	. 1427	.00345	1	608	2.45
Intercept Differences for Ethnicity	11	12	.1427	.1320	.01070	1	609	7.60 *
foreign Language 1984 - 198	5 Junior	(Ethnicity n	ot rested	)				
Slope Differences for Sex	7	8	.2222	. 2209	.00139	1	480	0.86
Intercept Differences for Sex	8	9	.2209	. 1641	.05680	1	481	35.07 *
Foreign Language 1984 - 1985 J	lunior (E	thnicity = Whi	te, Black	& Hispanic)	(Sex not te	ested)		
Slope Differences for Ethnicity	10	11	. 1872	. 1781	.00909	2	478	2.67
Intercept Differences for Ethnicity	11	12	. 1781	. 1640	.01402	2	480	4.09
foreign Language 1985 - 198	36 Junior	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.2049	. 1993	.00566	1	247	1.76
Intercept Differences for Sex	8	9	.1993	.1795	.01977	1	248	6.12
Foreign Language 1985 - 19	986 Junio	r (Ethnicity =	White &	Hispanic) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.1569	. 1350	.02186	1	205	5.31
Intercept Differences for Ethnicity	<b>1</b> 1	12	. 1350	. 1325	.00252	1	206	0.60
foreign Language 1984 - 198	35 Senior	(Ethnicity r.	ot tested	>				
Slope Differences for Sex	7	8	. 1580	. 1566	.00142	1	224	0.38
Intercept Differences for Sex	8	9	. 1566	. 1474	.00913	1	225	2.44
Foreign Language 1984 - 19	P85 Senio	r (Ethnicity =	White &	Hispanic) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.0905	.0893	.00128	1	185	0.26
Intercept Differences for Ethnicity	11	12	. 0893	.0845	.00481	1	186	0.98
Secretary & Office Education lys	35 - 1980	Junior (Ethni	city = Wh	ite & Nonwhit	e) (Sex rio	t teste	ed)	
Slope Differences for Ethnicity	10	:1	.1747	.1738	.00095	1	215	0.25
Intercept Differences for Ethnicity	11	12	. 1737	. 1737	.00000	1	216	0.00
Secretary & Office Education 198	34 - 1985	Senior (Ethni	city = Wh	ite & Nonwhit	e) (Sex no	t test	ed)	
Slope Differences for Ethnicity	10	11	.0735	.0531	.02043	1	220	4.85
Intercept Differences for Ethnicity	11	12	.0531	.0483	.00480	1	221	1.12
Typing & Word Processing 1984 -	1985 Fre	shmen (Ethnic	ity nut t	ested)				
Slope Differences for Sex	7	В	. 2945	.2942	.00025	_1	507	0.18
Intercept Differences for Sex	8	9	.2942	. 2925	.00176	1	508	1.27
Typing & Word Processing 1984	1985 Fre	shmen (Ethnici	ty = Whit	e, Black & Hi	spanic) (S	ex not	tested)	
Slope Differences for Ethnicity	10	11	.2976	.2958	.00175	2	505	0.63
Intercept Differences for Ethnicity	11	12	.2958	. 2925	.00337	2	507	1.21

<u>Table D-5</u>. (Continued)

	Соп	nparison		<sup>2</sup>				•
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Typing & Word Processing 1985 -	1986 Fres	shmen (Ethnici	ty not to	ested)		-, -		
Slope Differences for Sex	7	8	. 1955	, 1954	.00008	1	492	0.05
Intercept Differences for Sex	8	9	.1954	.1865	.00895	1	493	5.49
Typing & Word Processing 1985	5-1986 Fres	shmen (Ethnicit	y = White	e & Hispanic)	(Sex not 1	ested)	•	
Slope Differences for Ethnicity	10	11	.2128	.2070	.00380	1	445	3.28
Intercept Differences for Ethnicity	11	12	.2070	.2048	.00221	1	446	1.24
Typing & Word Processing 1984 -	1985 Sopho	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.2302	. 2302	.00004	1	631	0.03
Intercept Differences for Sex	8	9	.2302	.2187	.01147	1	632	9.42 *
Typing & Word Processing 1984	1985 Sophi	omore (Ethnici:	ty = Whit	e, Black & Hi	spanic) (Se	ex not	tested)	
Slope Differences for Ethnicity	10	11	.2193	.2191	.00022	2	629	0.09
Intercept Differences for Ethnicity	11	12	.2191	.2187	.00040	2	631	0.16
Typing & Word Processing 1985 -	1986 Sophi	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.1374	.13?3	.00009	1	405	0.04
Intercept Differences for Sex	8	9	. 1373	. 1373	.00003	1	406	0.01
Typing & Word Processing 1985	-1986 Soph	omore (Ethnici	ty = Whit	e & Black) (S	ex not tes	ted)		
Slope Differences for Ethnicity	10	11	. 1422	. 1391	.00311	1	374	1.36
Intercept Differences for Ethnicity	11	12	. 1391	. 1361	.00302	1	375	1.31
Typing & Word Processing 1984	- 1985 Ju	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.2207	.2206	.00004	1	391	0.02
Intercept Differences for Sex	8	9	.2206	. 1883	.03231	1	392	16.25
Typing & Word Processing 19	84-1985 Ju	nior (Ethnicit	y = White	& Black) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	. 1961	. 1933	.00277	1	359	1.24
Intercept Differences for Ethnicity	11	12	. 1933	. 1916	.00168	1	360	0.75
Typing & Word Processing 1985	- 1986 Ju	nior (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	.1283	.1225	.00579	1	221	1.47
Intercept Differences for Sex	8	9	.1225	. 1096	.01292	1	555	3.27
Typing & Word Processing 19	85-1986 Ju	nior (Ethnicit	y = White	& Nonwhite)	(Sex not t	ested)		
Stope Differences for Ethnicity	10	11	.1378	. 1343	.00348	1	221	0.89
Intercept Differences for Ethnicity	11	12	. 1343	.1396	.02471	1	222	6.34
Typing & Word Processing 1984	- 1985 Se	nior (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	. 1980	.1894	.00856	1	216	2.31
Intercept Differences for Sex	8	9	. 1894	.1776	.01188	1	217	3.18
Accounting/Bookkeeping 1985 -	1986 Soph	omore (Ethnic	ity not t	ested)				
	/-							
Slope Differences for Sex	7	8	. 1762	. 1761	.00015	1	311	0.06

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<u>Table D-5</u>. (Continued)

Accounting/Bookkeeping 1984 - 1985 Junior (Ethnicity not tested)   Slope Differences for Sex		Comp	parison	,	12				
Slape Differences for Sex	F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Accounting/Bookkeeping 1985 - 1986 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1816 .1796 .00220 1 185 0.50  Intercept Differences for Sex 7 8 .1818 .1796 .1670 .00220 1 185 0.50  Accounting/Bookkeeping 1984 - 1985 Senior (Ethnicity not tested)  Slope Differences for Sex 8 9 .1796 .1670 .00220 1 186 2.86  Accounting/Bookkeeping 1984 - 1985 Senior (Ethnicity not tested)  Slope Differences for Sex 7 8 .2009 .1931 .01179 1 247 3.66  Intercept Differences for Sex 7 8 .2009 .1931 .01179 1 247 3.66  Intercept Differences for Sex 7 8 .2009 .1931 .01179 1 247 3.66  Intercept Differences for Sex 7 8 .2826 .00081 1 547 0.62  Slope Differences for Sex 8 9 .1931 .1700 .03302 1 248 7.08 *  Home Economics 1984 - 1985 Freshmen (Ethnicity ont tested)  Slope Differences for Sex 8 9 .2826 .2608 .02200 1 548 16.81 **  Home Economics 1984 - 1985 Freshmen (Ethnicity = White & Blank) (Sex not tested)  Slope Differences for Ethnicity 11 12 .3074 .3066 .00055 1 519 0.41  Intercept Differences for Ethnicity 11 12 .3066 .2651 .006100 1 520 46.12**  Bline Economics 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Ethnicity 11 12 .3073 .1918 .00189 1 312 0.73  Intercept Differences for Sex 7 8 .1937 .1918 .00189 1 312 0.73  Intercept Differences for Sex 7 8 .1937 .1918 .00189 1 312 0.73  Intercept Differences for Ethnicity 10 11 12 .1562 .10086 1 312 0.31  Intercept Differences for Ethnicity 11 12 .1562 .10086 1 312 0.31  Intercept Differences for Ethnicity 11 12 .1562 .00086 1 312 0.31  Intercept Differences for Sex 8 9 .1959 .1604 .03453 1 322 13.81 **  Home Economics 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 8 9 .1959 .1604 .03453 1 322 13.81 **  Home Economics 1985 - 1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Sex 8 9 .1951 .1004 .03124 1 322 12.65*  Home Economics 1985 - 1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 12 .1975 .1004 .03124 1 322 12.65*  Home Economics 1985 - 19	Accounting/Bookkeeping 1984 -	1985 Junio	or (Ethnicity	y not tes	ted)				<del></del>
Accounting/Bookkeeping 1985 - 1986 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1818 .1796 .00220 1 185 0.50 Intarnept Differences for Sex 8 9 .1796 .1670 .01262 1 186 2.86  Accounting/Bookkeeping 1984 - 1985 Senior (Ethnicity not tested)  Slope Differences for Sex 7 8 .2049 .1931 .01179 1 247 3.66 Intercept Differences for Sex 8 9 .1931 .1700 .02202 1 248 7.08 *  Rome Economics 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 8 9 .2828 .2808 .02200 1 548 16.81 **  Rome Economics 1984 - 1985 Freshmen (Ethnicity = White & Black) (Sex not tested)  Slope Differences for Sex 8 9 .2828 .2808 .02200 1 548 16.81 **  Home Economics 1984 - 1985 Freshmen (Ethnicity = White & Black) (Sex not tested)  Slope Differences for Ethnicity 11 12 .3016 .3066 .2651 .06150 1 520 46.12**  Rime Economics 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 8 9 .1919 .1519 .03993 1 313 15.47 **  Rime Economics 1985 - 1986 Freshmen (Ethnicity = White & Black) (Sex not tested)  Slope Differences for Sex 8 9 .1919 .1519 .03993 1 313 15.47 **  None Economics 1985 - 1986 Freshmen (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Sex 8 9 .1919 .1519 .03993 1 313 15.47 **  None Economics 1984 - 1985 Sophosore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1570 .1562 .00084 1 312 .0.31 .1569	Slope Differences for Sex	7	8	. 2898	.2896	.00026	1	239	0.09
Slope Differences for Sex   7   8   1818   1796   .00220   1   .185   0.50	Intercept Differences for Sex	8	9	. 2896	.2546	. 03496	1	240	11.81 **
Accounting/Bookkeeping 1984 - 1985 Senior   (Ethnicity not tested)   Slope Differences for Sex   7   8   2,049   1,1931   1,01179   1   248   7,08   1,08   1,000	Accounting/Bookkeeping 1985 -	1986 Junio	or (Ethnicit	y not tes	ted)				
Accounting/Bookkeeping 1984 - 1985 Senior (Ethnicity not tested)  Slope Differences for sex 7 8 .2049	Slope Differences for Sex	7	8	. 1818	.1796	.00220	1	185	0.50
Stope Differences for Sex	Intercept Differences for Sex	8	9	. 1796	.1670	.01262	1	186	2.86
Name Economics 1984 - 1985 Freshmen (Ethnicity not tested)   Slope Differences for Sex	Accounting/Bookkeeping 1984 -	1985 Seni	or (Ethnicit	y not tes	ted)				
	Slope Differences for Sex	7	8	. 2049	. 1931	.01179	1	247	3.66
Slope Differences for Sex	Intercept Differences for Sex	8	9	. 1931	.1700	.02302	1	248	7.08 *
Nome Economics 1984-1985   Freshmen (Ethnicity = White & Blank) (Sex not tested)   Slope Differences for Ethnicity   10	Home Economics 1984 - 1985	Freshmen	(Ethnicity n	ot <b>te</b> sked	>				
Home Economics 1984-1985 Freshmen (Ethnicity = White & Blank) (Sex not tested)   Slope Differences for Ethnicity   10	Slope Differences for Sex	7	8	. 2836	. 2828	.00081	1	547	0.62
Slope Differences for Ethnicity   10	Intercept Differences for Sex	8	Ģ	.2828	.2608	.02200	1	548	16.81 **
Name   Economics   1985 - 1986   Freshmen   (Ethnicity not tested)	Home Economics 1984-1985	Freshmen	(Ethnicity =	White & B	lack) (Sex no	t tested)			
#cne Economics 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .1937 .1918 .00189 1 312 0.73 Intercept Differences for Sex 8 9 .1919 .1519 .03993 1 313 15.47 **  **Mome Economics 1985-1986 Frushmen (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1570 .1562 .00084 1 312 0.31 Intercept Differences for Ethnicity 11 12 .1562 .1519 .00428 1 313 1.59  **Mome Economics 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1951 .1950 .00017 1 321 0.07 Intercept Differences for Sex 8 9 .1950 .1604 .03453 1 322 13.81 **  **Mome Economics 1984-1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2070 .1917 .01536 1 321 6.22 Intercept Differences for Ethnicity 11 12 .1917 .1604 .03124 1 322 12.45**  **Mome Economics 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 0 .1945 .1921 .00248 1 394 1.21 Intercept Differences for Sex 8 9 .1921 .1625 .02958 1 395 14.46 **  **Mome Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 12 .1917 .1604 .03124 1 322 12.45**  **Mome Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 1 .1717 .1628 .00889 1 394 4.23 Intercept Differences for Ethnicity 10 11 .1717 .1628 .00889 1 394 4.23 Intercept Differences for Ethnicity 11 1 12 .1628 .1625 .00027 1 395 0.13  ***Mome Economics 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Ethnicity 11 12 .1628 .1625 .00027 1 395 0.13	Slope Differences for Ethnicity	10	11	.3071	.3066	.00055	1	519	0.41
Slope Differences for Sex	Intercept Differences for Ethnicity	11	12	.3066	.2451	.06150	1	520	46.12**
Home Economics 1984 - 1985   Sophomore	Hene Economics 1985 - 1986	Freshmen	(Ethnicity n	ot tested	)				
Home Economics 1985-1986 Freshmen (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity	Slope Differences for Sex	7	8	. 1937	. 1918	.00189	1	312	U.73
Slope Differences for Ethnicity   10	Intercept Differences for Sex	8	9	. 1919	. 1519	.03993	1	313	15.47 **
Home Economics 1984 - 1985 Sophomore (Ethnicity not tested)   Slope Differences for Sex   7	Home Economics 1985-1986	Freshmen	(Ethnicity =	White & N	onwhite) (Sex	not teste	d)		
Home Economics 1984 - 1985 Sophomore (Ethnicity not tested)   Slope Differences for Sex	Slope Differences for Ethnicity	10	11	.1570	.1562	.00084	1	312	0.31
Stope Differences for Sex   7   8   .1951   .1950   .00017   1   321   0.07	Intercept Differences for Ethnicity	11	12	.1562	.1519	.00428	1	313	1.59
Home Economics 1984-1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity	Home Economics 1984 - 1985	Sophomore	(Ethnicity	not teste	d)				
Home Economics 1984-1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2070 .1917 .01536 1 321 6.22 Intercept Differences for Ethnicity 11 12 .1917 .1604 .03124 1 322 12.45**  Home Economics 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1945 .1921 .00248 1 394 1.21 Intercept Differences for Sex 8 9 .1921 .1625 .02958 1 395 14.46 *  Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1717 .1628 .00889 1 394 4.23 Intercept Differences for Ethnicity 11 12 .1628 .1625 .00027 1 395 0.13  Kome Economics 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1641 .1641 .00000 1 279 0.00	Slope Differences for Sex	7	8	. 1951	.1950	.00017	1	321	0.07
Slope Differences for Ethnicity   10	Intercept Differences for Sex	8	9	.1950	. 1604	.03453	1	322	13.81 **
Home Economics 1985 - 1986 Sophomore (Ethnicity not tested)   Slope Differences for Sex   7 8 .1945 .1921 .00248 1 394 1.21     Intercept Differences for Sex   8 9 .1921 .1625 .02958 1 395 14.46 **    Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity   10 11 .1717 .1628 .00889 1 394 4.23     Intercept Differences for Ethnicity   11 12 .1628 .1625 .00027 1 395 0.13     Kiome Economics 1984 - 1985 Junior (Ethnicity not tested)   Slope Differences for Sex   7 8 .1641 .1641 .00000 1 279 0.00	Home Economics 1984-1985 5	Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not teste	d)		
Home Economics 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1945 .1921 .00248 1 394 1.21 Intercept Differences for Sex 8 9 .1921 .1625 .02958 1 395 14.46 **  Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1717 .1628 .00889 1 394 4.23 Intercept Differences for Ethnicity 11 12 .1628 .1625 .00027 1 395 0.13  Klome Economics 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1641 .1641 .00000 1 279 0.00	Slope Differences for Ethnicity	10	11	.2070	.1917	.01536	1	321	6.22
Slope Differences for Sex         7         8         .1945         .1921         .00248         1         394         1.21           Intercept Differences for Sex         8         9         .1921         .1625         .02958         1         395         14.46         ***           Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)           Slope Differences for Ethnicity         10         11         .1717         .1628         .00889         1         394         4.23           Intercept Differences for Ethnicity         11         12         .1628         .1625         .00027         1         395         0.13           Kome Economics 1984 - 1985 Junior (Ethnicity not tested)           Slope Differences for Sex         7         8         .1641         .1641         .00000         1         279         0.00	Intercept Differences for Ethnicity	11	12	. 1917	.1604	.03124	1	322	12.45**
Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity   10	Home Economics 1985 - 1986	Sophonore	(Ethnicity	not teste	ed)				
Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1717 .1628 .00889 1 394 4.23 Intercept Differences for Ethnicity 11 12 .1628 .1625 .00027 1 395 0.13  Klome Economics 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1641 .1641 .00000 1 279 0.00	Slope Differences for Sex	7	E	.1945	.1921	.00248	1	394	1.21
Slope Differences for Ethnicity       10       11       .1717       .1628       .00889       1       394       4.23         Intercept Differences for Ethnicity       11       12       .1628       .1625       .00027       1       395       0.13         Rome Economics 1984 - 1985 Junior (Ethnicity not tested)         Slope Differences for Sex       7       8       .1641       .1641       .00000       1       279       0.00	Intercept Differences for Sex	8	ç	. 1921	.1625	.02958	1	395	14.46 **
Rome Economics 1984 - 1985 Junior         (Ethnicity not tested)           Slope Differences for Sex         7         8         .1641         .1641         .00000         1         279         0.00	Home Economics 1985-1986 9	Sophomore	(Ethnicity =	White & N	lonwhite) (Sex	not teste	d)		
Nome Economics 1984 - 1985 Junior (Ethnicity not tested)           Slope Differences for Sex         7         8         .1641         .00000         1         279         0.00	Slope Differences for Ethnicity	10	11	.1717	.1628	.00889	1	394	4.23
Slope Differences for Sex         7         8         .1641         .00000         1         279         0.00	Intercept Differences for Ethnicity	11	12	.1628	.1625	.00027	1	395	0.13
The state of the s	Nome Economics 1984 - 1985	5 Junior	(Ethnicity no	ot tested)					
Intercept Differences for Sex 8 9 .1641 .1499 .01416 1 280 4.74						.00000	1	279	0.00
	Intercept Differences for Sex	8	9	.1641	.1499	.01416	1	280	4.74

<u>Table D-5</u>. (Concluded)

		Cor	mparison	R	2				
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
	Home Economics 1984-1985	Junior (	Ethnicity = Whi	te & Nons	white) (Sex no	ot tested)			
Slope Differences for	Ethnicity	10	11	. 1569	.1545	.00241	1	279	0.80
Intercept Differences	for Ethnicity	11	12	. 1545	. 1499	.00455	1	280	1.51
1	Home Economics 1985 - 1986	5 Junior	(Ethnicity not	tested)					
Slope Differences for	Sex	7	8	.2108	.2096	.00122	1	358	0.55
Intercept Differences	for Sex	8	9	.2096	. 1328	.07686	1	359	34.91 **
	Home Economics 1985-1986	Junior (	Ethnicity = Whi	te & Nonv	white) (Sex no	ot tested)			
Slope Differences for	Ethnicity	10	11	.1352	.1333	.00191	1	358	0.79
Intercept Differences	for Ethnicity	11	12	.1333	.1327	.00051	1	<b>3</b> 59	0.21
ļ	Home Economics 1984 - 1985	Senior	(Ethnicity not	tested)					
Slope Differences for	Sex	7	8	. 1533	.1527	.0006ა	1	318	0.25
Intercept Differences	for Sex	8	9	.1527	.1224	.03023	1	319	11.38 **
	Home Economics 1984-1985	5 Senior	(Sthnicity = W	nite & Nor	nwhite) (Sex n	not tested)	)		
Slope Differences for	Ethnicity	10	11	. 1232	.1232	.00000	1	318	0.00
Intercept Differences	for Ethnicity	11	12	.1232	.1225	.00079	1	319	0.29
Compu	ter Programming 1985 - 198	36 Sophom	ore (Ethnicity	not test	ted)				
Slope Differences for	Sex	7	8	.2491	. 2479	.00122	ì	227	û.37
Intercept Differences	for Sex	8	9	. 2479	.2140	.03398	1	228	10.30 *
Com	puter Programming 1984 -	1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for	Sex	7	8	.2069	.2067	.00013	1	240	0.04
Intercept Differences	for Sex	8	9	.2067	.2056	.00115	1	241	0.35
Com	puter Programming 1985 -	1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for	Sex	7	8	.3532	.3502	.00306	1	157	0.74
Intercept Differences	for Sex	8	9	<b>.3</b> 502	.3012	.04897	1	158	11.91 **
Com	puter Programming 1984 -	1985 Seni	or (Ethnicity	not test	ed)				
Slope Differences for	Sex	7	8	. 1584	.1583	.00008	1	152	0.01
Intercept Differences		8	9	.1583	. 1493	.00904	1	153	1.64

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

Table 0-6. F-Tests of Significance for Electronics & Electrical Composite

English I - IV 1984 - 1985 Freshmen (Ethnicity = White, Black & Mispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2525 .2525 .00003 2 2 .2422 0.  Sex & Ethnicity Interaction Test 2 3 .2525 .22476 .00041 2 2 .2424 7.  Consistent Over or Under prediction of Subgroup 2 4 .2525 .2257 .02503 3 .2,242 5.  English I - IV 1985 - 1986 Freshmen (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .1989 .1976 .00137 2 1,989 1.  Sex & Ethnicity Interaction Test 2 3 .1976 .1985 .00137 2 1,999 1.  Sex & Ethnicity Interaction Test 3 .1881 .1883 .00181 1 1,997 4.  Intercept Differences for Sex 7 8 .1881 .1863 .00181 1 1,997 4.  Intercept Differences for Ethnicity 10 11 .121 .1391 .03371 .00928 1 1,998 12.  Stope Differences for Ethnicity 11 12 .1391 .13371 .00198 2 1,997 2.  English I - IV 1984 - 1985 Sophomore (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2741 .2739 .001021 2 2,206 0.  Sex & Ethnicity Interaction Test 2 3 .2739 .2721 .00177 2 2,208 2.  Stope Differences for Sex 7 8 .2718 .2600 .00172 2 1,203 37.  Stope Differences for Sex 7 8 .2718 .2600 .00172 2 2,208 0.  Sex & Ethnicity Interaction Test 2 3 .2739 .2721 .00177 2 2,208 2.  Stope Differences for Sex 7 8 .2718 .2600 .00172 2 2,208 2.  Stope Differences for Sex 7 8 .2718 .2600 .00172 2 2,304 1.  Intercept Differences for Sex 7 8 .2718 .2600 .00102 2 2,304 1.  Intercept Differences for Sex 7 8 .2718 .2600 .00102 2 2,304 1.  English I - IV 1903 - 1908 Sophomore (Ethnicity - white, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 10 11 .120 .1270 .00107 2 1,920 0.  Sex & Ethnicity Interaction Test 2 3 3 .2370 .2292 .00078 2 1,920 0.  Sex & Ethnicity Interaction Test 2 3 3 .2370 .2292 .00078 2 1,920 0.  English I - IV 1903 - 1908 Sophomore (Ethnicity - white, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 10 11 .120 .120 .00070 2 1,721 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 10 11 .120 .120 .00070 2 1,722 0.  Stope Differences f		Comp	parison	R	2			df2	
3-way Interaction Test (ASVAB-sex*ethnicity)	F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1		F
Sex & Ethnicity Interaction Test  English 1 - IV 1985 - 1986 Freshmen  Ethnicity Interaction Test (ASVAB*sex*ethnicity)  3-way Interaction Test (ASVAB*sex*ethnicity)  10 11 1,421 1,591 1,000 2 1,995 3,000 2 1,991	English I - IV 1984 - 19	85 Frest	nmen (Ethnici	ty = Whit	te, Black & H	lispanic)			
English 1 - 1V 1985 - 1986 Freshmen   CEthnicity = White, Black & Hispanic	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2525	.2525	.00003	2	2,422	0.05
### English I - IV 1985 - 1986 Freshmen (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVMB*sex*ethnicity)	Sex & Ethnicity Interaction Test	2	3	. 2525	.2476	.00491	2	2,424	7.96 **
3-way Interaction Test (ASVAB*sex*ethnicity)	Consistent Over or Under prediction of Subgroup	2	4	.2525	.2475	.00503	3	2,424	5.44 *
See & Ethnicity Interaction Test   2   3   1976   1945   .00307   2   1,991   3.	English I - IV 1985 - 19	86 Frest	nmen (Ethnici	ty = Whit	te, Black & H	lispanic)			
Stope Differences for Sex	3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1989	.1976	.00137	2	1,989	1.70
Stope Differences for Sex	Sex & Ethnicity Interaction Test	2	3	. 1976	. 1945	.00307	2	1,991	3.81
Intercept Differences for Sex   8   9   .1863   .1371   .0.4023   1   .1,998   120.	-	7	8	.1881	.1863	.00181	1	1,997	4.45
Stope Differences for Ethnicity	·	8	9	. 1863	.1371	.04923	1	-	120.88 **
English I - IV 1984 - 1985 Sophomore (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity)	•	-	11				2	-	3.49
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2741 .2739 .00021 2 2 .2,296 0.   \$6x & Ethnicity Interaction Test 2 3 .2739 .2721 .00177 2 .2,296 0.   \$6x & Ethnicity Interaction Test 2 3 .2739 .2721 .00177 2 .2,296 2.   \$10pe Differences for Sex 7 8 .2718 .2600 .01172 1 2,304 37.   \$10pe Differences for Ethnicity 10 11 .1891 .1879 .00115 2 2,302 1.   Intercept Differences for Ethnicity 11 12 .1879 .1869 .00102 2 2,304 1.    English 1 - Iv 1905 - 1986 Sophomere (Ethnicity = White, Black & Rispanic)	•							•	2.30
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2741 .2739 .00021 2 2 .2,296 0.	Fnalish 1 - IV 1984 - 198	35 Sophor	more (Ethnici	tv = Whit	te. Black & F	lispanic)			
Sex & Ethnicity Interaction Test   2   3   .2739   .2721   .00177   2   2,298   2.	_						2	2.296	0.34
Sign   Differences for Sex   7									2,80
Slope Differences for Ethnicity	•							-	37.09 **
English 1 - IV 1983 - 1986 Sophomore   (Ethnicity = White, Black & Hispanic)	·								1.63
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2377 .2370 .00076 2 1,942 0.  Sex & Ethnicity Interaction Test 2 3 .2370 .2362 .00078 2 1,944 0.  Slope Differences for Sex 7 8 .2311 .2222 .00889 1 1,950 22.  Slope Differences for Ethnicity 10 11 .1526 .1521 .00051 2 1,948 0.  Intercept Differences for Ethnicity 11 12 .1521 .1434 .00870 2 1,950 10.  English I - IV 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic)  Sway Interaction Test (ASVAB*sex*ethnicity) 1 2 .2407 .2407 .00107 2 1,721 1.  Sex & Ethnicity Interaction Test 2 3 .2407 .2405 .00017 2 1,723 0.  Slope Differences for Sex 7 8 .2392 .2284 .01076 1 1,729 24.  Slope Differences for Ethnicity 10 11 .1269 .1267 .00019 2 1,727 0.  Intercept Differences for Ethnicity 11 12 .1267 .1241 .00260 2 1,729 2.  English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2234 .2234 .00000 1 1,259 0.  Sex & Ethnicity Interaction Test 2 3 .2234 .2234 .00000 1 1,259 0.  Sex & Ethnicity Interaction Test 2 3 .2234 .2234 .00000 1 1,259 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2234 .2234 .00000 1 1,259 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 1 1 1 .1048 .1042 .00060 1 1,260 15  Slope Differences for Sex 7 8 .2231 .2135 .00061 1 1,262 0.  Intercept Differences for Ethnicity 11 12 .1042 .1042 .00006 1 1,262 0.  English I - IV 1904 - 1985 lenior (Ethnicity = White, Black & Hispanic)	·								1.44
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2377 .2370 .00076 2 1,942 0.  Sex & Ethnicity Interaction Test 2 3 .2370 .2362 .00078 2 1,944 0.  Slope Differences for Sex 7 8 .2311 .2222 .00889 1 1,950 22.  Slope Differences for Ethnicity 10 11 .1526 .1521 .00051 2 1,948 0.  Intercept Differences for Ethnicity 11 12 .1521 .1434 .00870 2 1,950 10.  English I - IV 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic)	F	26 2	(51)	ru i dhi	ta Diak Ri	ui eseist			
Sex & Ethnicity Interaction Test         2         3         .2370         .2362         .00078         2         1,944         0.           Slope Differences for Sex         7         8         .2311         .2222         .00889         1         1,950         22.           Slope Differences for Ethnicity         10         11         .1526         .1521         .00051         2         1,948         0.           Intercept Differences for Ethnicity         11         12         .1521         .1434         .00870         2         1,950         10.           English 1 - IV 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic)           English 1 - IV 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic)           Sawy Interaction Test (ASVAB*sex*ethnicity)         1         2         .2417         .2407         .00107         2         1,721         1.           Slope Differences for Sex         7         8         .2392         .2284         .00107         2         1,722         24           English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)           English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)           English I - IV 1985 - 1986 Junior (Ethnicity = White & Black)							2	1 942	0.97
Slope Differences for Sex   7	•								0,99
Slope Differences for Ethnicity   10								-	22.54 **
English   1 -	•								0.58
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2417 .2407 .00107 2 1,721 1.  Sex & Ethnicity Interaction Test 2 3 .2407 .2405 .00017 2 1,723 0.  Slope Differences for Sex 7 8 .2392 .2284 .01076 1 1,729 24.  Slope Differences for Ethnicity 10 11 .1269 .1267 .00019 2 1,727 0.  Intercept Differences for Ethnicity 11 12 .1267 .1241 .00260 2 1,729 2.  English 1 - IV 1985 - 1986 Junior (Ethnicity = White & Black)  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2234 .2234 .00000 1 1,259 0.  Slope Differences for Sex 7 8 .2231 .2135 .00961 1 1,262 15.  Slope Differences for Ethnicity 10 11 .1048 .1042 .00060 1 1,262 0.  Intercept Differences for Ethnicity 11 12 .1042 .1042 .00066 1 1,263 0.  English 1 - IV 1984 - 1985 lenior (Ethnicity = White, Black)  Slope Differences for Ethnicity 11 1 2 .1042 .00066 1 1,263 0.  English 1 - IV 1984 - 1985 lenior (Ethnicity = White, Black & Hispanic)  Sway Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Slope Differences for Sex 7 8 .2010 .1964 .00459 1 1,283 7.  Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79.	•							•	10.01 **
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2417 .2407 .00107 2 1,721 1.  Sex & Ethnicity Interaction Test 2 3 .2407 .2405 .00017 2 1,723 0.  Slope Differences for Sex 7 8 .2392 .2284 .01076 1 1,729 24.  Slope Differences for Ethnicity 10 11 .1269 .1267 .00019 2 1,727 0.  Intercept Differences for Ethnicity 11 12 .1267 .1241 .00260 2 1,729 2.  English 1 - IV 1985 - 1986 Junior (Ethnicity = White & Black)  Stay Interaction Test (ASVAB*sex*ethnicity) 1 2 .2234 .2234 .00000 1 1,259 0.  Slope Differences for Sex 7 8 .2231 .2135 .00961 1 1,262 15.  Slope Differences for Ethnicity 10 11 .1048 .1042 .00069 1 1,262 0.  Intercept Differences for Ethnicity 11 12 .1042 .1042 .00006 1 1,263 0.  English 1 - IV 1984 - 1985 lenior (Ethnicity = White, Black & Hispanic)  Slope Differences for Ethnicity 11 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .2044 .00114 2 1,277 0.  Slope Differences for Sex 7 8 .2010 .1964 .00459 1 1,283 7.  Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79.	English 1 - IV 1984 - 1	1085 Jun	ior (Ethnicit	v = Whit	e Rlack & H	ispanic)			
Sex & Ethnicity Interaction Test         2         3         .2407         .2405         .00017         2         1,723         0. Slope Differences for Sex         7         8         .2392         .2284         .01076         1         1,729         24. Slope Differences for Ethnicity         10         11         .1269         .1267         .00019         2         1,727         0. Intercept Differences for Ethnicity         11         12         .1267         .1241         .00260         2         1,729         2.           English 1 - IV 1985 - 1986 Junior         (Ethnicity = White & Black)           English I - IV 1985 - 1986 Junior         (Ethnicity = White & Black)           Sway Interaction Test (ASVAB*sex*ethnicity)         1         2         .2234         .2234         .00000         1         1,258         0.           Slope Differences for Sex         7         8         .2231         .2135         .00961         1         1,262         0           English I - IV 1984 - 1985 Lenior         (Ethnicity = White, Black & Hispanic)           Sway Interaction Test (ASVAB*sex*ethnicity)         1         2         .2063         .2056         .00070         2         1,275         0           Sway I				•	-	•	2	1 721	1.21
Slope Differences for Sex   7   8   2.392   .2284   .01076   1   1,729   24.5									0.19
Slope Differences for Ethnicity   10									24.46 *
English 1 - IV 1985 - 1986 Junior   (Ethnicity = White & Black)	•								0.19
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2234 .2234 .00000 1 1,258 0.  Sex & Ethnicity Interaction Test 2 3 .2234 .2234 .00000 1 1,259 0.  Slope Differences for Sex 7 8 .2231 .2135 .00961 1 1,262 15  Slope Differences for Ethnicity 10 11 .1048 .1042 .00069 1 1,262 0.  Intercept Differences for Ethnicity 11 12 .1042 .1042 .00008 1 1,263 0.  English I - IV 1984 - 1985 lenior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test 2 3 .2056 .2044 .00114 2 1,277 0.  Slope Differences for Sex 7 8 .2010 .1964 .00459 1 1,283 7.  Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79.	•								2.58
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2234 .2234 .00000 1 1,258 0.  Sex & Ethnicity Interaction Test 2 3 .2234 .2234 .00000 1 1,259 0.  Slope Differences for Sex 7 8 .2231 .2135 .00961 1 1,262 15  Slope Differences for Ethnicity 10 11 .1048 .1042 .00069 1 1,262 0.  Intercept Differences for Ethnicity 11 12 .1042 .1042 .00008 1 1,263 0.  English 1 - IV 1984 - 1985 lenior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0.  Sex & Ethnicity Interaction Test 2 3 .2056 .2044 .00114 2 1,277 0.  Slope Differences for Sex 7 8 .2010 .1964 .00459 1 1,283 7.  Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79.	Fooligh 1 - 1V 1085 -	108A lum	vior (Ethnici)	v = Uhit	o & Black)				
Sex & Ethnicity Interaction Test       2       3       .2234       .2234       .00000       1       1,259       0         Slope Differences for Sex       7       8       .2231       .2135       .00961       1       1,262       15         Slope Differences for Ethnicity       10       11       .1048       .1042       .00069       1       1,262       0         Intercept Differences for Ethnicity       11       12       .1042       .1042       .00008       1       1,263       0         English 1 - IV 1984 - 1985 Lenior (Ethnicity = White, Black & Hispanic)         3-way Interaction Test (ASVAB*sex*ethnicity)       1       2       .2063       .2056       .00070       2       1,275       0         Sex & Ethnicity Interaction Test       2       3       .2056       .2044       .00114       2       1,277       0         Slope Differences for Sex       7       8       .2010       .1964       .00459       1       1,284       79         Intercept Differences for Sex       8       9       .1964       .1466       .04984       1       1,284       79						. 00000	1	1.258	0.01
Slope Differences for Sex         7         8         .2231         .2135         .00961         1         1,262         15           Slope Differences for Ethnicity         10         11         .1048         .1042         .00069         1         1,262         0           Intercept Differences for Ethnicity         11         12         .1042         .1042         .0008         1         1,263         0           English 1 - IV 1984 - 1985 Lenior         (Ethnicity = White, Black & Hispania)           3-way Interaction Test (ASVAB*sex*ethnicity)         1         2         .2063         .2056         .00070         2         1,275         0           Sex & Ethnicity Interaction Test         2         3         .2056         .2044         .00114         2         1,277         0           Slope Differences for Sex         7         8         .2010         .1964         .00459         1         1,283         7           Intercept Differences for Sex         8         9         .1964         .1466         .04984         1         1,284         79	•							•	0.00
Slope Differences for Ethnicity         10         11         .1048         .1042         .00069         1         1,262         0           Intercept Differences for Ethnicity         11         12         .1042         .1042         .00008         1         1,263         0           English 1 - IV 1984 - 1985 Lenior         (Ethnicity = White, Black & Hispania)           3-way Interaction Test (ASVAB*sex*ethnicity)         1         2         .2063         .2056         .00070         2         1,275         0           Sex & Ethnicity Interaction Test         2         3         .2056         .2044         .00114         2         1,277         0           Slope Differences for Sex         7         8         .2010         .1964         .00459         1         1,283         7           Intercept Differences for Sex         8         9         .1964         .1466         .04984         1         1,284         79	·								15.61 *
Intercept Differences for Ethnicity 11 12 .1042 .1042 .00008 1 1,263 0  English 1 - IV 1984 - 1985 .enior (Ethnicity = White, Black & Hispanic)  3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0  Sex & Ethnicity Interaction Test 2 3 .2056 .2044 .00114 2 1,277 0  Slope Differences for Sex 7 8 .2010 .1964 .00459 1 1,283 7  Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79	·								
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0 Sex & Ethnicity Interaction Test 2 3 .2056 .2044 .00114 2 1,277 0 Slope Differences for Sex 7 8 .2010 .1964 .00459 1 1,283 7 Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79	•								
3-way Interaction Test (ASVAB*sex*ethnicity) 1 2 .2063 .2056 .00070 2 1,275 0 Sex & Ethnicity Interaction Test 2 3 .2056 .2044 .00114 2 1,277 0 Slope Differences for Sex 7 8 .2010 .1964 .00459 1 1,283 7 Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79	English 1 - 19 109/ -	1085 - 65	nior (Ethnicis	rv = Whit	o Black & H	ismanici			
Sex & Ethnicity Interaction Test       2       3       .2056       .2044       .00114       2       1,277       0         Slope Differences for Sex       7       8       .2010       .1964       .00459       1       1,283       7         Intercept Differences for Sex       8       9       .1964       .1466       .04984       1       1,284       79	•						2	1 275	0.57
Slope Differences for Sex         7         8         .2010         .1964         .00459         1         1,283         7           Intercept Differences for Sex         8         9         .1964         .1466         .04984         1         1,284         79	•								
Intercept Differences for Sex 8 9 .1964 .1466 .04984 1 1,284 79	·							-	
	·							-	79.64 *
5tope Differences for Ethnicity 10 11 .1490 .1470 .00136 2 1,281 }	•							-	
	•								

	Comp	parison		ę <sup>2</sup>				
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
General Math 1984 -	1985 Freshi	nen (Ethnicit	y = White	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0760	.0747	.00123	2	1,167	0.78
Sex & Ethnicity Interaction Test	2	3	.0747	.0718	.00297	2	1,169	1.87
Slope Differences for Sex	7	8	.0690	.0682	.00078	1	1,175	0.99
Intercept Differences for Sex	8	9	.0682	.0553	.01287	1	1,176	16.24 **
Slope Differences for Ethnicity	10	11	.0585	.0585	.00003	2	1,173	0.02
Intercept Differences for Ethnicity	11	12	.0585	.0554	.00315	2	1,175	1.97
General Math 1985 -	101 Freshi	nen (Ethnicit	ty = White	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0292	.0289	.00029	1	549	0.17
Sex & Ethnicity Interaction Test	2	3	.0289	.0259	.00301	1	550	1.70
Slope Differences for Sex	7	8	.0176	.0175	.00014	1	553	0.08
Intercept Differences for Sex	8	9	.0175	.0103	.00722	1	554	4.07
Slope Differences for Ethnicity	10	11	.0188	.0108	.00801	1	553	4.51
Intercept Differences for Ethnicity	11	12	.0108	.0103	.00055	1	554	0.31
General Math 1984 -	1985 Sopho	nore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0213	.0785	.00277	2	736	1.11
Sex & Ethnicity Interaction Test	2	3	.0785	.0727	.00582	2	738	2.33
Slope Differences for Sex	7	8	.0601	.0599	.00028	1	744	0.23
Intercept Differences for Sex	8	9	.0599	.0540	.00587	1	745	4.65
Slope Differences for Ethnicity	10	11	.0662	.0653	.00092	2	742	0.36
Intercept Differences for Ethnicity	11	12	.0653	.0540	.01130	5	744	4.50
General Math 1985 -	1986 Sopho	more (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1245	.1190	.00552	1	305	1.92
Sex & Ethnicity Interaction Test	2	3	.1190	.1173	.00176	1	306	0.61
Slope Differences for Sex	7	8	.1037	.1034	.00026	1	309	0.09
Intercept Differences for Sex	8	9	. 1034	.0581	.94530	1	310	15.66 **
Slope Differences for Ethnicity	10	11	.0736	.0688	.90481	1	309	1.60
Intercept Differences for Ethnicity	11	12	.0688	.0581	.01963	1	310	3.54
General Math 1984 -	1985 Juni	or (Ethnicit	/ = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0780	.0669	.01108	1	266	3.20
Sex & Ethnicity Interaction Test	2	3	.0669	.0667	.00001	1	267	0.00
Slope Differences for Sex	7	3	.0647	.0642	.00044	1	270	0.13
Intercept Differences for Sex	8	9	.0642	.0319	.03235	1	271	9.37 *
Slope Differences for Ethnicity	10	11	.0340	.0339	.00002	1	270	0.01
Intercept Differences for Ethnicity	11	12	.0339	.0319	.00206	1	271	0.58
General Math 1985 - 1986	S Junior (	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1355	.1510	.00451	1	222	1.16
Intercept Differences for Sex	8	9	.1310	.0903	.04069	1	223	10.44 *
General Math 1985 - 198	36 Junior (	Ethnicity = W	hite & Bl	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1203	.1130	.00723	1	195	1.60
Intercept Differences for Ethnicity	11	12	.1130	.1125	.00052	1	196	0.11
General Hath 1984 - 1985	Senior (	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.0942	.0904	.00378	1	230	0.96
Intercept Differences for Sex	8	9	.0904	. 0863	.00404	1	231	1.03

Table D-6. (Continued)

	Cor	nparison	i	<sup>2</sup>			dfz	
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1		F
General Math 1984 - 198	5 Senior	(Ethnicity =	White & B	lack) (Sex not	tested)			
Slope Differences for Ethnicity	.0	11	.1308	.1307	.00015	1	203	0.04
Intercept Differences for Ethnicity	11	12	.1307	,1147	.01603	1	204	3.76
Algebra 1984 - 1985	Freshme	n (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1909	.1867	.00426	1	1,180	6.21
Sex & Ethnicity Interaction Test	2	3	.1867	.1864	.00023	1	1,181	0.33
Slope Differences for Sex	7	8	.1833	. 1782	.00509	1	1,184	7.39 *
Intercept Differences for Sex	8	9	.1782	.1193	891خ0.	1	1,185	84.95 *
Slope Differences for Ethnicity	10	11	.1272	. 1226	.00464	1	1,184	6.29
Intercept Differences for Ethnicity	11	12	.1226	. 1193	.00328	1	1,185	4.42
Algebra 1985 - 1986	freshme	n (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1928	.1927	.00006	1	708	0.05
Sex & Ethnicity Interaction Test	2	3	.1927	.1913	.00145	1	709	1.28
Slope Differences for Sex	7	8	.1886	. 1881	.00050	1	712	0.44
Intercept Differences for Sex	δ	9	.1881	, 1295	.05856	1	713	51.42 *
Slope Differences for Ethnicity	10	11	. 1333	.1331	.00021	1	712	0.18
Intercept Differences for Ethnicity	11	12	.1331	. 1295	.00354	1	713	2.92
Algebra 1984 - 1985	Sophomo	re (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1344	. 1344	.99901	1	871	0.01
Sex & Ethnicity Intr.action Test	2	3	. 1344	. 1285	.00596	1	872	6.01
Slope Differences for Sex	7	8	.1273	.1218	.00550	1	875	5.51
Intercept Differences for Sex	8	9	.1218	.0860	.03576	1	876	35.67 *
Slope Differences for Ethnicity	10	11	.0866	.0963	.00029	1	875	0.28
Intercept Differences for Ethnicity	11	12	.0863	.0860	.00027	1	876	0.26
Algebra 1985 - 1986	Sophomo	re (Ethnicity	= White	& Monwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1501	.1498	.00028	1	617	0.20
Sex & Ethnicity Interaction Test	2	3	.1498	.1482	.00159	1	618	1.16
Slope Differences for Sex	7	8	.1427	. 1395	.00326	1	621	2.36
Intercept Differences for Sex	8	9	. 1395	. 1126	.02691	1	622	19.45 *
Slope Differences for Ethnicity	10	11	.1159	.1144	.00154	1	621	1.08
Intercept Differences for Ethnicity	11	12	.1144	.1126	.00179	1	622	1.26
<b>A</b> lgebra 1984 - 19	985 Junio	r (Ethnicity	= White &	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1855	.1845	.00095	1	489	0.57
Sex & Ethnicity Interaction Test	2	3	. 1845	.1835	.00105	i	490	0.63
Slope Differences for Sex	7	8	.1722	.1701	.00206	1	493	1,23
Intercept Differences for Sex	8	9	.1701	.1210	.04910	1	494	29.23 *
Scope Differences for Ethnicity	10	11	. 1290	.1244	.00462	1	493	2.61
Intercept Differences for Ethnicity	11	12	. 1244	. 1210	.00340	1	494	1.92
Algebra 1985 - 1986 Jun	nios /F*	hnicity not to	etod)					
Stope Differences for Sex	7	8	.1687	. 1522	.01641	1	273	5.39
stope a riverenced for sex	3	9	. 1523	.1322	.02005	1	274	6.48

		Cor	roarison		<sub>δ</sub> ς				
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	ı
	Algebra 1985 - 1986	Junior (Etl	nnicity = White	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for	Ethnicity	10	11	.1367	. 1336	.00316	1	273	1.00
Intercept Differences	for Ethnicity	11	12	.1336	.1322	.00137	1	274	0.43
	Algebra 1984 - 1985	Senior (Et	nnicity not te	sted)					
Slope Differences tor	Sex	7	8	.1710	.1569	.01406	1	265	4.49
Intercept Differences	for Sex	8	9	.1569	.1017	.05524	1	266	17.45 **
	Algebra 1984 - 1985	Senior (Et	nnicity = White	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for	Ethnicity	10	11	. 1353	.1131	.02215	1	265	6.79 *
	Geometry 1985 - 1986	Freshmen (	Ethnicity not	tested)					
Slope Differences for	Sex	7	8	. 2414	.2414	.00000	1	511	0.00
Intercept Differences	fur Sex	8	9	.2414	.2228	.01864	1	512	12.58 **
Ge	cometry 1985 - 1986 Fre	shmen (Ethn	icity = White,	Black &	Hispanic) (Se	x not test	ed)		
Slope Differences for	Ethnicity	10	11	.2250	.2236	.00145	2	509	0.48
Intercept Differences	for Ethnicity	11	12	.2236	.2228	.00080	2	511	0.26
	Geometry 1984 - 1985 S	ophomore (	Ethnicity not	tested)					
Stope Differences for	Sex	7	8	.2446	.2445	.00000	1	561	0 00
Intercept Differences	for Sex	8	Ò	.2446	.2147	.02990	1	562	22.25 **
Ge	eometry 1984 - 1985 Sop	shomore (Eth	nicity = White	, Black &	Hispanic) (S	ex not tes	ted)		
Slope Differences for	Ethnicity	10	11	.2236	.2177	.00588	2	559	2.12
Intercept Differences	for Ethnicity	11	12	.2177	.2147	.00301	2	561	1.08
	Geometry 1985 - 1986 S	Sophomore (	Ethnicity not	tested)					
Slope Differences for	Sex	7	8	.2688	.2671	.00169	1	410	0.94
Intercept Differences	To: Sex	8	9	.2671	.2268	.04028	1	411	22.59 **
	Geometry 1985 - 198	36 Sopholione	(Ethnicity =	White & B	Hack) (Sex no	t tested)			
Slope Differences for	Ethnicity	10	11	. 2589	.2424	. 316: 1	1	371	8.26 *
	Geometry 1984 - 1985	Junior (E	thnicity not t	estrd)					
Slope Differences for	Sex	7	8	.2202	.2160	.00420	1	305	1.64
Intercent Differences	for Sex	8	9	. 2161	.1708	.04524	1	300	17.66
	Geometry 1984 - 198	Junior (E	tanicity = Whi	te & None	white) (Sex no	ot tested)			
Stope Differences for	Ethnicity	10	11	. 1754	.1735	.G01? <u>₹</u>	1	305	0.72
Intercept Differences	for Ethnicity	11	12	. 1735	.1708	.00267	1	306	0.99
	Geometry 1985 - 1986	S Junior (F	thnicity not t	ested)					
Slope Differences for	Sex	7	8	.2579	.2511	.00682	1	123	1.13
Intercept Differences	for Sex	8	Ģ	.2511	.1991	.05201	1	124	8.61 *
	Geometry 1985 - 198	B6 Junior (E	thnicity = Whi	te & Noni	white) (Sex no	ot tested)			
Slope Differences for	Ethnicity	10	11	. 2925	.2529	.03956	1	123	6.88 *

Table D-6. (Continued)

	Co	mparison	, 	,2				
est Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Geometry 1984 - 1985 Sen	ior (E	thnicity not te	ested)					
pe Differences for Sex	7	8	.2121	. 2095	.00255	1	107	0.35
ercept Differences for Sex	8	9	. 2095	.2091	.00042	i	108	0.06
Geometry 1984 - 1985 Se	nior (E	thnicity = Whit	te & Nonwi	hite) (Sex no	t tested)			
pe Differences for Ethnicity	10	11	.2323	.2285	.00382	1	107	0.53
ercept Differences for Ethnicity	11	12	. 2285	. 2091	.01941	1	109	2.72
Calculus 1985 - 1986 Jun	ior (E	thnicity not to	ested)					
pe Differences for Sex	7	8	. 1030	.0957	.00722	1	147	1.18
ercept Differences for Sex	8	9	.0957	.0948	.00094	1	148	0.15
General Science 1984 - 1	<b>98</b> 5 fre	shmen (Ethnic	ity = Wni	te, Black & H	ispanic)			
may interaction Test (ASVAB*sex*ethnicity)	1	2	.2708	. 2698	.00100	2	1,956	1.34
& Ethnicity Interaction Test	2	3	. 2698	. 2622	.00764	2	1,958	10.25
sistent Over or Under prediction of Subgroup	2	4	. 2698	. 2685	.00131	3	1,958	1.17
General Science 1985 - 1986	neshme	n (Ethnicity)	not <b>te</b> ste	d)				
ipe Differences for Sex	7	8	. 1476	.1475	.00015	1	274	0.05
ercept Differences for Sex	8	9	. 1475	.1357	.01175	1	275	3.79
General Science 1985 - 198	6 Fresh	men (Ethnicity	= White	& Black) (Sex	not teste	d)		
pe Differences for Ethnicity	10	11	. 1572	.1377	.01942	1	240	5.53
ercept Differences for Ethnicity	11	12	.1377	.1377	.00006	1	241	0.02
General Science 1984 - 1	985 Sor	homore (Ethni	city = Wh	ite & Non⊨hit	e)			
may Interaction Test (ASVAB*sex*ethnicity)	1	?	.2313	.2312	.00061	1	341	0.00
& Ethnicity Interaction Test	2	3	.2312	.2158	.01547	1	342	6.88
pe Differences for Sex	7	8	.2002	.1985	.00176	1	345	0.76
ercept Differences for Sex	8	9	. 1985	.1437	.95474	1	346	23.63
pe Differences for Ethnicity	10	11	. 1636	.1600	.00362	1	345	1,49
ercept Differences for Ethnicity	11	12	.1600	.1437	.01623	1	346	6.68
General Science 1985 - 1786 S	ophomer	e (Ethnicity	noi t <b>e</b> ste	·d)				
pe Differences for Sex	. 7	8	. 1782	.1782	.00001	1	183	0.00
ercept Differences for Sex	5	9	.1782	.1370	.04125	1	184	9.24
General Science 1985 - 1986	Sophor	ore (Ethnicity	= White	& Black) (Sex	not teste	<b>a</b> )		
se Differences for Ethnicity	10	11	. 1832	.1830	.00015	1	158	0.03
ercept Differences for Ethnicity	11	12	.1830	.1596	.02339	1	159	4.55
General Science 1984 - 1985	Junior	(Ethnicity no	t tested)					
pe Differences for Sex	7	ų.	. 1015	.0837	.01784	1	174	3.45
ercept Differences for Sex	8	9	.0837	.0578	.02589	1	175	4.94
General Science 1984 - G	985 Jun	ior (Ethnicity	= White &	Black) (Sex	not tested	)		
pe Differences for Ethnicity	10	11	.1289	.1240	.00495	´ 1	149	0.85
And the second of the second o	11	12	.1240	.0609	.06307	1	150	10.80

Table D-6. (Continued)

	Co	mparison	1	<sup>2</sup>				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>?</sup> Change	df 1	dfa	F
General Science 1985 - 1986	Junior	(Ethnicity no	t tested)		<del> </del>		<del></del>	
Slope Differences for Sex	7	8	.2314	.2310	.00040	1	258	0.14
Intercept Differences for Sex	8	9	.2310	.2050	.02603	1	259	8.77 *
General Science 1985 - 1986	S Junior	(Ethnicity = 1	white & N	onwnite) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	.2056	.2054	.00019	1	258	0.06
Intercept Differences for Ethnicity	11	12	.2054	.2050	.00040	1	259	0.13
General Science 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1022	.1015	.00071	1	182	0.14
Intercept Differences for Sex	8	9	.1015	.0765	.02499	1	183	5.09
Biology I - II 1984 - 1985 F	Freshmer	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.2303	.2301	.00020	1	299	0.08
Intercept Differences for Sex	8	9	.2301	.2007	.02942	1	<b>3</b> 00	11.47 **
Biology I - II 1984 - 1985	Freshmo	n (Ethnicity =	White &	Nonwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	. 2073	.2009	.00637	1	299	2.40
Intercept Differences for Ethnicity	11	12	.2009	.2007	.00022	1	300	0.08
Biology I - II 1985 - 1	1986 Fre	shmen (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1814	.1814	.00001	1	1,120	0.01
Sex & Ethnicity Interaction Test	2	3	.1814	.1814	.00000	1	1,120	0.00
Slope Differences for Sex	7	8	.1794	.1794	.00000	1	1,123	0.00
Intercept Differences for Sex	8	9	.1794	.1354	.04399	1	1,124	60.26 *1
Slope Differences for Ethnicity	10	11	.1371	.1361	.00093	1	1,123	1.21
Intercept Differences for Ethnicity	11	12	. 1361	.1354	.00074	1	1,124	0.97
8iology 1 - 11 1984 - 1	985 Sopt	nomore (Ethnic	ity = ₩hi	te, Black H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2589	.2573	.00158	2	1,371	1.46
Sex & Ethnicity Interaction Test	2	3	.2573	.2499	.00748	2	1,373	6.91 *
Consistent Over or Under prediction of Subgroup	2	4	.2573	.2422	.01509	3	1,373	9.30 *
Slope Differences for Sex	2	5	. 2573	.2424	.01496	1	1,3 <i>7</i> 3	27.65 **
Slope Differences for Ethnicity	2	6	.2573	.2570	.00036	2	1,373	0.33
Biology I - II 1985 - 1986	Sophomo	re (Ethnicity						
Slope Differences for Sex	7	8	.2333	.22 <b>3</b> 6	.00979	1	335	4.28
Intercept Differences for Sex	8	9	. 2236	.1451	. 97846	1	336	33.95 **
Biology 1 - 11 1985 - 1986 Sop	homore	(Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	testec	d)	
Slope Differences for Ethnicity	10	11	. 1505	.1457	.00478	2	333	0.94
Intercept Differences for Ethnicity	11	12	.1457	.1451	.00063	2	335	0.12
Biology I - II 1984 -	1985 Ji	unior (Ethnici	ty = Whit	e & Worwhite)	ı			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2709	.2709	.00006	1	397	0.03
Sex & Ethnicity Interaction Test	2	3	.2709	.2708	.00007	1	398	0.04
Slope Differences for Sex	7	8	.2594	.2583	.00110	1	401	0.59
Intercept Differences for Sex	8	9	. 2584	.2027	.05568	1	402	30.18 *
Slope Differences for Ethnicity	10	11	.2176	.2173	.00023	1	401	0.12
Intercept Differences for Ethnicity	11	12	.2173	.2027	.01465	1	402	7.53 *

<u>Table D-6</u>. (Continued)

		Com	parison	ş	<sup>2</sup>				
f-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
В	iology 1 - 11 1985 -		(Ethnicity not	tested)					
Slope Difference, 1	Sex	7	8	.3610	.3329	.02810	1	147	6.46
Intercept Dirfer .s	or Sex	8	9	.3329	.2745	.05840	1	148	12.96 **
В	iology I - II 1984 -	1985 Senior	(Ethnicity not	tested)					
Slope Differences for	Sex	7	8	. 3638	.3593	.00443	1	195	1.36
Intercept Differences	for Sex	8	9	.3593	.3124	.04699	1	196	14.38 **
	Biology 1 - 11 1984	- 1985 Senior	(Ethnicity =	White & (	Black) (Sex n	ot tested)			
Slope Differences for	Ethnicity	10	11	.3608	.3606	.00013	1	176	0.04
Intercept Differences	for Ethnicity	11	12	. 3606	.3210	.03966	1	177	10.98 *
Che	emistry 1 - 11 1985 -	1986 Freshmer	(Ethnicity)	not teste	d)				
Stope Differences for	Sex	7	8	. 1991	. 1969	.00215	1	128	0.34
Intercept Differences	for Sex	8	9	. 1969	. 1573	.03968	1	129	6.37
Chen	nistry 1 - 11 1984 -	1985 Sophomore	Ethnicity	not teste	d)				
Slope Differences for	Sex	7	3	. 1060	.1039	.00206	1	1 <b>6</b> 8	0.39
Intercept Differences	for Sex	8	9	. 1040	.0646	.03938	ï	169	7.43 *
Chen	nistry 1 - 11 1985 -	1986 Sophomore	E (Ethnicity)	not teste	d)				
Slope Differences for	Sex	7	8	. 1629	.1588	.00409	1	430	2.10
Intercept Differences	for Sex	8	9	. 1588	.0952	.06366	1	431	32.62 **
Ch	nemistry I - 11 1984	- 1985 Junior	(Ethnicity n	ot tested	)				
Slope Differences for	Sex	7	8	. 2039	.2035	.00033	1	426	0.18
Intercept Differences	for Sex	8	9	. 2035	. 1332	.07029	1	427	37.68 **
(	Chemistry I - II 198	4 - 1985 Junio	r (Ethnicity =	White &	Nonwhite) (Se	ex not test	ed)		
Slope Differences for	Ethnicity	10	11	. 1551	. 1489	.00625	1	426	3.15
Intercept Differences	for Ethnicity	11	12	. 1489	.1333	.01562	1	427	7.84
CI	nemistry I - II 1985	- 1986 Junior	(Ethnicity n	ot tested	)				
Slope Differences for	Sex	7	8	. 1931	. 1826	.01049	1	137	1.78
Intercept Differences	for Sex	8	9	. 1826	.0889	.09371	1	138	15.82 **
(	Chemistry I - 11 198	5 - 1986 Junio	r (Ethnicity =	White &	Nonwhite) (Se	x not test	ed)		
Slope Differences for	Ethnicity	10	11	. 1182	.1145	.00376	1	137	0.58
Intercept Differences	for Ethnicity	11	12	. 1145	.0889	. 92558	1	138	3.99
CI	hemistry 1 - 11 1984	- 1985 Senior	(Ethnicity n	ot tested	1)				
Stope Differences for	Sex	7	8	.2422	.2412	.00103	1	156	0.21
Litercept Differences	for Sex	8	9	. 2412	.2314	.00977	1	157	2.02
	Chemistry ( - 11 198	4 - 1985 Senio	r (Ethnicity =	White &	Nonwhite) (Se	ex not test	ed)		
Slope Differences for	Ethnicity	10	11	.2587	.2415	.01720	1	156	3.62
Intercept Differences	for Ethnicity	11	12	. 2416	.2314	.01018	1	157	2.11

<u>Table D-6</u>. (Continued)

	Со	mparison	,	,2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfj	df2	F
Physics I - 11 1985 - 1986	Junior	(Ethnicity no	t tested)			<del></del> _		<u> </u>
Slope Differences for Sex	7	8	.1081	.1041	.00400	1	232	1.04
Intercept Differences for Sex	8	9	.1041	.0565	.04760	1	233	12.38 **
Physica t - 11 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 2039	.1982	.00576	1	166	1.20
Intercept Differences for Sex	8	9	.1982	.1250	.07312	1	167	15.23 **
Government & Civics 1984 - 19	25 Fresh	men (Ethnicit	y not ces	ted)				
Slope Differences for Sex	7	8	. 2490	.2453	.00371	1	344	1.70
Intercept Differences for Sex	8	9	. 2453	.2282	.01709	1	345	7.81 *
Government à Civics 1984 - 198	5 Sophor	ore (Ethnicit	y not tes	ted)				
Slope Differences for Lex	7	8	.1807	.1558	.02490	1	155	4.71
Intercept Differences for Sex	8	9	.1558	.1090	.04685	1	156	8.66 *
Government & Civics 1985 - 198	K Sophor	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.1411	. 1335	.00766	1	417	3.72
Intercept Difference, for Sex	8	9	. 1335	.0901	.04331	1	418	20.89 **
Government & Civics 1985 - 19	86 Sopho	omore (Ethnicit	y = White	& Hispanic)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	.1150	.1147	.00028	1	388	0.12
Intercept Differences for Ethnicity	11	12	.1147	.0909	. 92385	1	389	10.48 *
Government & Civics 1984 - 19	85 Junio	or (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2612	.2583	.00287	1	456	1.77
Intercept Differences for Sex	8	9	.2583	.2161	.04226	1	457	26.04 **
Government & Civics 1984 - 1	1985 Juni	ior (Ethnicity	= White &	Nonwhite) (S	ex not tes	ted)		
Slope Differences for Ethnicity	10	11	.2211	.2201	.00098	1	456	0.57
Intercept Differences for Ethnicity	11	12	.2201	.2161	.00404	1	457	2.37
Government & Civics 198	35 - 1986	S Junior (Ethn	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2512	.2512	.00000	1	707	0.00
Sex & Ethnicity Interaction Test	2	3	.2512	. 2504	.00080	1	708	0.76
Slope Differences for Sex	7	8	.2436	.2374	.00621	1	711	5.84
Intercept Differences for Sex	8	Ģ	.2374	. 1881	.04926	1	712	45.99 **
Slope Differences for Ethnicity	1û	11	. 1936	. 1922	.00139	1	711	1.22
Intercept Differences for Ethnicity	11	12	. 1922	. 1882	.00404	1	712	3.56
Government & Civics 198	84 - 1989	Senior (Ethr	icity = \	/hite & Black)	1			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	5	.2628	.2618	.00100	1	602	13.0
Sex & Ethnicity Interaction Test	2	3	.2618	, 2606	.00121	1	603	0.99
Slope Differences for Sex	7	8	,2511	. 2505	32000.	1	606	0.45
Intercept Differences for Sex	8	9	.2506	.2224	.02611	1	607	22.77 •
Slope Differences for Ethnicity	10	11	.2318	. 2316	.00017	1	606	0.13
Intercept Differences for Ethnicity	11	12	.2316	.2224	.00921	1	607	7.27 *

<u>Table D-6</u>. (Continued)

	Com	parison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df <sub>2</sub>	F
History 1984 - 1985	Freshmen	(Ethnicity	= White,	Black & Hispar	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2728	.2711	.00171	2	1,319	1,55
Sex & Ethnicity Interaction Test	2	3	.2711	.2681	.00305	2	1,321	2.77
Slope Differences for Sex	7	8	. 2640	.2637	.00025	1	1,327	0.45
Intercept Differences for Sex	8	9	. 2637	.2178	.04591	1	1,328	881 *
Slope Differences for Ethnicity	10	11	.2261	.2215	.00458	2	1,325	. ?
Intercept Differences for Ethnicity	11	12	.2215	.2178	.00370	2	1,327	.* . 15
History 1985 - 198	5 freshmen	(Ethnicity	≖ White &	Black)				
3-way Interaction lest (ASVAB*sex*ethnicity)	1	2	.2457	. 2456	.00013	1	1,344	0.22
Sex & Ethnicity Interaction Test	2	3	.2458	.2455	.00025	1	1,344	0.45
Slope Differences for Sex	7	8	. 2455	.2451	.00035	1	1,347	0.63
Intercept Differences for Sex	8	9	. 2451	.2248	.02936	1	1,348	36.35 •
Slope Differences for Ethnicity	10	11	. 2248	.2248	.00002	1	1,347	0.00
Intercept Differences for Ethnicity	11	12	.2248	.2248	.00003	1	1,348	0.06
History 1984 - 198	5 Sophomor	e (Ethnicity	= White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2559	.2551	.00077	1	1,430	1.48
Sex & Ethnicity Interaction Test	2	3	.2551	. 2533	.00181	1	1,431	3.48
Slope Differences for Sex	7	8	. 2515	.2511	.00047	1	1,434	0.91
Intercept Differences for Sex	8	9	. 2510	.2176	.03342	1	1,435	64.05 *
Slope Differences for Ethnicity	10	11	.2198	.2193	.00053	1	1,434	0.98
Intercept Differences for Ethnicity	11	12	.2193	.2176	.00165	1	1,435	3.03
History 1985 - 198	6 Sophomor	e (Ethnicity	= White,	, Black & Hisp	anic)			
3-way Interaction fest (ASVAB*sex*ethnicity)	1	2	.2197	.2194	.00030	2	1,465	0.28
Sex & Ethnicity Interaction Test	2	3	.2194	.2133	.00616	2	1,467	5.79 =
slope Differences for Sex	7	8	.2050	.2014	-00360	1	1,473	6.66 *
Intercept Differences for Sex	8	9	.2014	.1483	.05308	1	1,474	97.98 *
Slope Differences for Et nicity	10	11	.1604	.1562	.00421	2	1,471	3.69
Intercept Differences for Ethnicity	11	12	.1562	.1483	.00793	2	1,475	6.93 *
History 1984 · 1	985 Junior	(Ethnicity	= Wnite &	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2932	.2930	.00019	1	1,102	0.30
Sex & Ethnicity Interaction Test	2	3	. 2930	.2923	.00068	1	1,103	1.06
Stope Differences for Sex	7	8	.2908		.00232	1	1,106	3.62
Intercept Differences for Sex	8	Ģ	. 2884	.2752	.05320	1	1,107	82.77 *
Slope Differences for Ethnicity	10	11	.2382		.00002	1	1,106	0.03
Intercept Differences for Ethnicity	11	12	.2381		.00289	1	1,107	4.19
History 1985 - 1986 Ju	ınıor (Etl	nnicity not to	ested)					
Slope Differences for Sex	7	8	. 2422	. 2291	.01319	1	428	7.45
History 1985 - 1986	Junior (I		nite & Bl	ack) (Sex not	test <b>e</b> d)			
Slope Differences for Ethnicity	10	11	. 1692		.00002	1	409	0.01
Intercept Differences for Ethnicity	11	12	. 1692		.00308	1	410	1.52

Table 0-6. (Continued)

	Co	mparison		R <sup>2</sup>		-		
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
History 1984 - 1985 Ser	nior (Et	hnicity not te	sted)					
Slope Differences for Sex	7	ខ	.3578	.3531	.00470	1	423	3.09
Intercept Differences for Sex	8	9	.3531	.3273	.02586	1	424	16.95 **
History 1984 - 1985	Senior (	Ethnicity = Wh	ite & Bla	ck) (Sex not	tcsted)			
Slope Differences for Ethnicity	10	11	.3630	.3595	.00349	1	402	2.20
Intercept Differences for Ethnicity	11	12	.3595	.3365	.02294	1	403	14.44 **
Foreign Language 1984 - 1985	5 Freshme	n (Ethnicity i	not teste	d)				
Slope Differences for Sex	7	3	.2512	.2500	.00113	1	1,012	1.52
Intercept Differences for Sex	8	9	.2500	.1 <i>7</i> 30	.07702	1	1,013	104.04 **
. Foreign Language 1984 - 1985 Fi	reshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not )	tested	)	
: Differences for Ethnicity	10	11	.1939	. 1934	.00049	2	1,010	0.30
intercept Differences for Ethnicity	11	12	. 1934	.1730	.02039	2	1,012	12.79 **
foreign Language 1985 - 198	6 Freshme	en (Ethnicity	not teste	·d)				
Slope Differences for Sex	7	8	. 1992	. 1937	.00554	1	797	5.51
Intercept Differences for Sex	8	9	. 1937	.1268	.06681	1	798	66.11 **
Foreign Language 1985 - 1986 Fi	reshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.1477	,1374	.01032	2	795	4.81 *
Foreign Language 1984 - 1985	Sophomor	e (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.2107	.2075	.00320	1	892	3.62
Intercept Differences for Sex	ង	9	.2075	.1034	.10410	1	893	117.30 **
Foreign Language 1984 - 1985 S	ophomor e	(Ethnicity = W	hite, Bla	ick & Hispanic	) (Sex not	teste	d)	
Slope Differences for Ethnicity	10	11	.1203	.1147	.00560	2	890	2.83
Intercept Differences for Ethnicity	11	12	.1147	. 1034	.01127	?	892	5.68 *
Foreign Language 1985	- 1986 Sc	ophomore (Ethn	icity = W	/hite & Nonwhi	te)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1856	.1854	.00019	1	604	0.14
Sex & Ethnicity Interaction Test	5	3	. 1854	. 1851	.00023	1	605	0.17
Slope Differences for Sex	7	8	.1686	.1652	.00344	1	608	2.52
Intercept Differences for Sex	8	9	.1652	.0857	.07942	1	609	57.93 **
Slope Differences for Ethnicity	19	11	.1022	.1007	.00150	1	808	1.02
Intercept Differences for Ethnicity	11	12	.1007	.9857	.01494	1	609	10.12 *
Foreign Language 1984 - 19	85 Jurio	(Ethnicity n	ot tested	<b>i</b> )				
Slope Differences for Sex	7	8	.2166	.2164	.00025	1	480	0.15
Intercept Differences for Sex	8	9	.2164	.1085	.10787	1	481	56.22
Foreign Language 1984 - 1985	Junior (1	Ethnicity = Whi	te, Black	c & Hispanic)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	.1421	.1317	.01044	2	478	2.91
Intercept Differences for Ethnicity	11	12	.1317	.1085	17ڏ30.	2	480	6.40 *

Table D.6. (Continued)

	Con	parison	5	2				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Foreign Language 1985 - 198	oinut 6	(Ethnicity no	t tested	)				
Slope Differences for Sex	7	8	.2001	.1970	.00304	1	247	0.94
Intercept Differences for Sex	8	9	. 1970	.1259	.07117	1	248	21.98 **
Foreign Language 1985 - 19	86 Junior	(Ethnicity =	White & I	Hispanic) (Se	k not teste	ed)		
Slope Differences for Ethnicity	10	13	.0842	.0790	.00517	1	205	1.16
Intercept Differences for Ethnicity	11	12	.0790	.0757	.00333	1	206	0.74
Foreign Language 1984 - 198	5 Senior	(Ethnicity rx	t tested	<b>&gt;</b>				
Slope Differences for Sex	7	8	. 1566	.1545	.00205	1	224	0.54
Intercept Differences for Sex	8	9	. 1545	.1239	.03057	1	225	8.14 *
Foreign Language 1984 - 19	85 Senior	(Ethnicity =	White & I	Hispanic) (Se.	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.0802	.0789	.00133	1	185	0.27
Intercept Differences for Ethnicity	11	12	.0789	.0725	.00636	1	186	1.28
Secretary & Office Education 198	5 - 1986	Junior (Ethnic	city = Wh	ite & Norwhit	e) (Sex not	testo	ed)	
Slope Differences for Ethnicity	10	11	.1029	.1010	.00193	1	215	0.46
Intercept Differences for Ethnicity	11	12	.1010	.1009	.00004	1	216	0.01
Secretary & Office Education 198	4 - 1985	Senior (Ethnic	city = Wh	ite & Nonwhit	e) (Sex no	teste	ed)	
Slope Differences for Ethnicity	10	11	.0949	.0885	.00639	1	220	1.55
Intercept Differences for Ethnicity	11	12	.0885	.0788	.00972	1	221	2.36
Typing & Word Processing 1984 -	1985 Fres	shmen (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.2301	.2272	.00293	1	507	1.93
Intercept Differences for Sex	8	9	.2272	. 2006	.02658	1	508	17.47 **
Typing & Word Processing 1984-	1985 Fre	shmen (Ethnici	ty = Whit	e, Black & Hi	spanic) (S	ex not	tested)	
Slope Differences for Ethnicity	10	11	.2054	.2007	.00478	2	505	1.52
Intercept Differences for Ethnicity	11	12	.2006	. 2006	.00006	2	507	0.02
Typing & Word Processing 1985 -	1986 Fres	shmen (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	. 1640	. 1627	.00125	1	492	0.73
Intercept Differences for Sex	8	9	. 1627	. 1223	.04044	1	493	23.81 **
Typing & Word Processing 1985-	1986 Fre	shmen (Ethnici	ty ≈ Whit	e & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	. 1136	.1135	.00015	1	445	0.07
Intercept Differences for Ethnicity	11	12	. 1135	. 1090	.00444	1	446	2.23
Typing & Word Processing 1984 - 1	1985 Sophi	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	, 1926	. 1886	.00400	1	631	3.12
Intercept Differences for Sex	8	9	. 1386	. 1234	.06520	1	632	50.78 **
Typing & Word Processing 1984-1	1985 Soph	omore (Ethnici	ty ≈ Whit	e, Black & Hi	spanic) (S	ex not	tested)	
				,	,			
Slope Differences for Ethnicity	10	11	. 1252	. 1244	.00083	2	629	0.30

Table D-6. (Continued)

	Co	mparison	!	45				·
F-Test Comparison	Full	Restricted	full	Restricted	R <sup>2</sup> Change	df1	df2	F
Typing & Word Processing 1985 -	1986 Soph	omore (Ethnici	ty not to	ested)				
Slope Differences for Sex	7	8	.1481	.1338	.01430	1	405	6.80 *
Typing & Word Processing 1985	-1985 Soph	omore (Ethnicit	y = <b>W</b> hite	e & Black) (S	e× not test	ed)		
Slope Differences for Ethnicity	10	11	.1128	.1121	.00071	1	374	0.30
Intercept Differences for Ethnicity	11	12	.1121	.1093	.00278	1	375	1.17
Typing & Word Pricessing 1984	- 1985 Ju	nior (Ethnicit	y not te	sted)				
Slope Differences for Sex	7	8	. 1960	. 1936	.00238	1	391	1.16
Intercept Differences for Sex	8	9	. 1936	.1040	.08961	1	<b>3</b> 92	43.56 *1
Typing & Word Processing 19	84-1985 Ju	nior (Ethnicity	= White	& Black) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.1099	.1091	.00083	1	359	0.34
Intercept Differences for Ethnicity	11	12	.1091	.1063	.00277	1	360	1.12
Typing & Word Processing 1985	- 1986 Ju	nio: (Ethnici:	y not te	sted)				
Slope Differences for Sex	7	8	. 1434	.1356	.00777	1	221	2.00
Intercept Differences for Sex	8	9	.1356	.0806	.05503	1	2.22	14.13 **
Typing & Word Processing 19	85-1986 Ju	nior (Ethnicity	/= White	& Nonwhite)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	.1025	.0974	,00509	1	221	1.25
Intercept Differences for Ethnicity	11	12	.0974	.080.	.01687	1	222	4.15
Typing & Word Processing 1984	· 1985 Se	nior (Ethnici)	y not te	sted)				
Slope Differences for Sex	7	8	. 1909	. 1843	.00661	1	216	1.76
Intercept Differences for Sex	8	9	. 1843	. 1364	.04789	1	217	12.74
Accounting/Bookkeeping 1985 -	1986 Soph	omore (Ethnici	ty not t	ested)				
Slope Differences for Sex	7	8	.2039	. 1997	.00425	1	311	1.66
Intercept Differences for Sex	8	9	. 1997	. 1326	.06708	1	312	26.15 *
Accounting/Bookkeeping 198/	- 1985 Jun	ior (Ethnicity	not tes	ted)				
Slope Differences for Sex	7	8	.2911	.2822	.00890	1	239	3.00
Intercept Differences for Sex	8	9	. <b>28</b> 22	. 1454	. 13681	1	240	45.74 *
Accounting/Bookkeeping 1985	- 1986 Jun	ior (Ethnicity	not tes	ted)				
Slope Differences for Sex	7	8	. 1566	. 1525	.00403	1	185	0.88
Intercept Differences for Sex	8	9	. 1525	, 0947	. 05781	1	186	12.69 *
Accounting/Bookkeeping 1984	- 1 <del>9</del> 85 Sen	ior (Ethnicity	y not tes	ted)				
Slope Differences for Sex	7	8	. 1835	. 1807	.00284	1	247	C.86
Intercept Differences for Sex	8	9	.1807	.1140	.06664	1	248	20.17 •
Home Economics 1984 - 198	5 freshmer	(Ethnicity n	ot tested	1)				
		-						
Slope Differences for Sex	7	8	. 2691	.2600	.00005	1	547	0.04

<u>Table D-6</u>. (Continued)

		Cor	mparison		2				· -
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
	Home Economics 1984-1	1985 Freshmen	(Ethnicity =	White & B	lack) (Sex no	tested)			
Slope Differences for	Ethnicity	10	11	.2509	.2492	.00165	1	519	1.14
Intercept Differences	for Ethnicity	11	12	.2492	.1836	.06559	1	520	45.43**
Но	ome Economics 1985 - 1	1986 Freshmen	(Ethnicity n	ot tested	<b>)</b>				
Slope Differences for	Sex	7	8	.1943	. 1896	.00 67	1	312	1.81
Intercept Differences	for Sex	8	9	.1896	.1104	.07917	1	313	30.58 **
	Home Economics 1985-1	986 Freshmen	(Ethnicity = '	⊌hite & N	onwhite) (Scx	not tested	1)		
Slope Differences for	Ethnicity	10	11	.1149	.1149	.00000	1	312	0.00
Intercept Differences	for Ethnicity	11	12	.1149	.1104	.00445	1	313	1.57
Ho	ome Economics 1984 - 1	1985 Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for	Sex	7	8	. 1882	. 1879	.00025	1	321	0.10
Intercept Differences	for Sex	8	9	. 1879	.1170	.07091	1	322	28.12 **
•	Home Economics 1984-19	985 Sophomore	(Ethnicity =	White & N	unwhite) (Sex	not tested	1)		
Slope Differences for	Ethnicity	10	11	, 1608	. 1524	.00837	1	321	3.20
Intercept Differences	for Ethnicity	11	12	. 1524	.1170	.03535	1	322	13.43**
н	ome Economics 1985 - 1	1986 Sophomor	e (Ethnicity	not teste	d;				
Slope Differences for	Sex	7	8	. 1882	. 1873	.00030	1	394	0.44
Intercept Differences	for Sex	3	9	. 1873	. 1033	.08402	1	395	40.84 **
	Home Economics 1985-19	986 Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not tested	1)		
Slope Differences for	Ethnicity	10	11	.1107	.1046	.00601	1	394	2.66
Intercept Differences	for Ethnicity	11	12	. 1046	.1033	.00134	1	395	0.59
1	Home Economics 1984 -	1985 Junior	(Ethnicity no	t tested)					
Slope Differences for	Sex	7	8	.1779	.1777	.C0017	1	279	0.06
Intercept Differences	for Sex	8	9	.1777	.1322	.04551	1	280	15.50 **
	Home Economics 1984-	1985 Junior (	Ethnicity = Wh	ite & Non	white) (Sex n	ot tested)			
Slope Differences for	Ethnicity	10	11	. 1381	.1341	.00399	1	279	1.29
Intercept Differences	for Ethnicity	11	12	. 1341	.1322	.00186	1	280	0.60
I	Home Economics 1985 -	1986 Junior	(Ethnicity no	t tested)					
Slupe Differences for		7	8	.2143	.2143	. 00006	1	358	0.03
Intercept Differences		8	Ģ	.2143	.0702	. 14412	1	359	65.85 *
	Home Economics 1985-	1986 Junior (	Ethnicity = Wh	ite & Non	white) (Sex n	ot tested)			
Slope Differences for		10	11	.0757	.0740	.00173	1	358	0.67
Intercept Differences	·	11	12	.0740	.0702	.00381	1	359	1.48
	Home Economics 1984 -	1985 Senior	(Ethnicity no	t rested)					
Slope Differences for		7	8	.1566	.1564	.00021	1	318	0.08
•									

Table D-6. (Concluded)

	Co	Comparison		<sub>R</sub> 2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 198	4-1985 Senior	(Ethnicity = W	hite & No:	nwhite) (Sex	not tested)	)		<del></del>
Slope Differences for Ethnicity	10	11	.1038	.0979	.00595	1	318	2.11
Intercept Differences for Ethnicity	11	12	.0979	.0974	.00049	1	319	0.17
Computer Programming 1985	- 1986 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	. 2343	.2288	.00557	1	227	1.65
Intercept Differences for Sex	8	9	.2288	.1251	.10371	1	228	30.66 **
Computer Programming 19	34 - 1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2786	.2780	.00060	1	240	0.20
Intercept Differences for Sex	8	9	.2780	.2292	.04878	1	241	16.28 **
Computer Programming 19	85 - 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2909	.2908	.00014	1	157	0.03
Intercept Differences for Sex	8	9	.2908	.1578	.13301	1	158	29.63 **
Computer Programming 19	84 - 1985 Seni	or (Ethnicity	not test	ed)				
Siope Differences for Sex	7	8	. 1753	.1736	.00171	1	152	0.32
Intercept Differences for Sex	8	9	.1736	, 1765	.00307	1	153	0.57

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

Table D.7. F-Tests of Significance for Health, Soc Tech Composite

	Con	parison	!	<sub>8</sub> 2				F
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	dfz	
English I - IV 1984 -	1985 Fres	hmen (Ethnic	ity≂ ⊌hi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2428	.2411	.00175	2	2,422	2.80
Sex & Ethnicity Interaction Test	5	3	,2411	. 2365	.00458	2	2,424	7.32 **
Consistent Over or Under prediction of Subgroup	5	4	.2411	. 2372	.00389	3	2,424	4.14 *
English 1 - IV 1985 -	19 <b>3</b> 6 Fres	hmen (Ethnici	ity = ⊌hi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1887	. 1870	.00172	2	1,989	2.11
Sex & Ethnicity Interaction Test	2	3	. 1870	.1842	.00279	2	1,991	3.41
Slope Differences for Sex	7	8	. 1763	.1757	.00062	1	1,997	1.50
Intercept Differences for Sex	8	9	, 1757	.1274	.04830	1	1,998	117.07 *
Slope Differences for Ethnicity	10	11	.1337	.1298	.00394	2	1,995	4.53
Intercept Differences for Ethnicity	11	12	.1298	.1274	.00237	2	1,997	2.72
English 1 - IV 1984 - 1	985 Sopho	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2480	.2478	.00022	2	2,296	0.34
Sex & Ethnicity Interaction Test	2	3	.2478	.2466	.00113	2	2,298	1.73
Slope Differences for Sex	7	8	.2460	. 2364	.00954	1	2,304	29.14 *
Slope Differences for Ethnicity	10	11	. 1669	. 1665	.00037	2	2,302	0.51
Intercept Differences for Ethnicity	11	12	. 1665	.1650	.00153	2	2,304	2.11
English 1 - 1V 1985 - 1	986 Sopho	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2318	. 2307	.00116	2	1,942	1.46
Sex & Ethnicity Interaction Test	2	3	.2307	.2300	.00071	2	1,944	0.90
Slope Differences for Sex	7	8	.2245	.2143	.01019	1	1,950	25.63 *
Slope Differences for Ethnicity	10	11	. 1451	.1449	.00022	2	1,948	0.25
Intercept Differences for Ethnicity	11	12	.1449	.1359	.00897	2	1,950	10.23 *
English 1 - IV 1984 -	1985 Jur	nior (Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2285	.2283	.00021	2	1,721	0.24
Sex & Ethnicity Interaction Test	2	3	.2283	.2280	.00028	2	1,723	0.31
Slope Differences for Sex	7	8	. 2265	.2177	.00879	1	1,729	19.64 *
Slope Differences for Ethnicity	10	11	.1181	.1179	.00023	2	1,727	0.23
Intercept Differences for Ethnicity	11	12	.1179	.1159	.00197	2	1,729	1.93
English I - IV 1985 -	1986 Jur	nior (Ethnici	ty = Whit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2008	.2006	.00028	1	1,258	0.43
Sex & Ethnicity Interaction Test	2	3	.2006	. 2005	.00002	1	1,259	0.02
Slope Differences for Sex	7	8	.2004	. 1916	.00888	1	1,262	14.02 *
Slope Differences for Ethnicity	10	11	.0858	.0855	.00031	1	1,262	0.42
Intercept Differences for Ethnicity	11	12	.0855	.0853	.00020	1	1,263	0.28
English I - IV 1984 -	1985 Ser	nior (Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1935	. 1929	.00058	2	1,275	0.46
Sex & Ethnicity Interaction Test	2	3	. 1929	, 1918	.00117	2	1,277	0.93
Slope Differences for Sex	7	8	.1834	.1776	.00581	1	1,283	9.13 *
Intercept Differences for Sex	8	9	.1776	. 1343	.04332	1	1,284	67.64 *
Slope Differences for Ethnicity	10	11	.1389	. 1345	.00435	2	1,281	3.24
Intercept Differences for Ethnicity	11	12	. 1346	. 1343	.00026	2	1,283	0.20

Table D-7. (Continued)

	Com	parison	R	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Moth 1984 -	1985 Fresh	men (Ethnicit	y = White	, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0715	.0706	.00088	2	1,167	0.55
Sex & Ethnicity Interaction Test	2	3	.0706	.0670	.00367	2	1,169	2,71
Slope Differences for Sex	7	8	.0637	.0632	.00051	1	1,175	0.64
Intercept Differences for Sex	8	9	.0632	.0507	.01241	1	1,176	15.57 **
Slope Differences for Ethnicity	10	11	.0546	.0536	.00101	2	1,173	0.63
Intercept Differences for Ethnicity	11	12	-0536	.0507	.00289	2	1,175	1.79
General Math 1985 -	1986 Fresh	men (Ethnicit	y = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0349	. 0349	.00008	1	549	0.05
Sex & Ethnic ty Interaction Test	2	3	.0349	.0326	.00226	1	550	1.29
Slope Differences for Sex	7	8	.0276	. 0265	.00112	1	553	0.64
Intercept Differences for Sex	8	9	.0265	.0185	.00796	1	554	4.53
Slope Differences for Ethnicity	10	11	.0241	.0199	.00417	1	553	2.36
Intercept Differences for Ethnicity	11	12	.0199	.0185	.00142	1	554	0.80
General Math 1984 -	1985 Sopho	more (Ethnici	ty≃ ₩hit	e, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0826	.0809	.00173	2	736	0.70
Sex & Ethnicity Interaction Test	2	3	.0809	.0750	.00584	2	738	2.35
Slope Differences for Sex	7	8	.0610	.0598	.00121	1	744	0.96
Intercept Differences for Sex	8	9	.0598	.0536	.00619	1	745	4.90
Slope Differences for Ethnicity	10	11	.0574	.0646	.00283	7	742	1.13
Intercept Differences for Ethnicity	11	12	.0645	.0536	.01096	2	744	4.36
General Math 1985 -	1986 Sopho	more (Ethnici	ty = Whit	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1142	.1048	.00944	1	305	3.25
Sex & Ethnicity Interaction Test	2	3	.1048	.1030	.00177	1	306	0.60
Slope Differences for Cex	7	8	.0904	.0904	.00005	1	309	0.02
Intercept Differences for Sex	8	9	.0904	.0483	.04208	1	310	14.34 **
Slope Differences for Ethnicity	10	11	.0611	.0602	.00088	1	309	0.29
Intercept Differences for Ethnicity	11	12	.0602	. 0483	.01193	1	310	3.94
General Math 1984	- 1985 Juni	or (Ethnicity	, = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0714	.0714	.00004	1	266	0.01
Sex & Ethnicity Interaction Test	2	3	.0714	.0709	.00044	1	267	0.13
Slope Differences for Sex	7	8	.0689	.065C	.00389	1	270	1.13
Intercept Differences for Sex	8	9	.0650	.0315	.03349	1	271	9.71 *
Slope Differences for Ethnicity	10	11	.0337	.0330	.00070	1	270	0.20
Intercept Differences for Ethnicity	11	12	.0330	.0315	.00152	1	271	U.42
General Math 1985 - 198	6 Junior (	Ethnicity not	test€d)					
Slope Differences for Sex	7	8	.1223	.1187	.00354	1	222	0.89
Intercept Differences for Sex	8	9	.1187	.0791	.03960	1	223	10.02 *
General Math 1985 - 19	86 Junior (	Ethnicity = Wh	nite & Bla	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1007	.0977	.00304	1	195	0.66
Intercept Differences for Ethnicity	11	12	.0976	.0963	.00130	1		

<u>Table D-7</u>. (Continued)

	Co	.parison		ę <sup>2</sup>				
F-Test Comparison	Full	Restricted	Fu! l	Restricted	R <sup>2</sup> Change	df <sub>1</sub>	df2	F
General Math 1984 - 1985	Serior	(Ethnicity not	tested)			-		
Slope Differences for Sex	7	8	.0988	.0894	.00935	1	230	2.39
Intercept Differences for Sex	8	9	.0894	.0878	.00167	1	231	0.42
General Math 1984 - 198	5 Senior	(Ethnicity =	⊌hite & B	lack) (Sex no	t test <del>e</del> a)			
Slope Differences for Ethnicity	10	11	.1217	.1196	.00207	1	203	0.48
Intercept Differences for Ethnicity	11	12	.1196	.1038	.01576	1	204	3.65
Algebra 1984 - 1985	Freshme	n (Ethnicity	= White &	Nonwhite)				
S-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1817	.1749	.00577	1	1,180	9.77 *
Sex & Ethnicity Interaction Test	2	3	.1749	.1749	.00000	1	1,181	0.00
Slope Differences for Sex	7	8	.1723	.1696	.00265	1	1,184	3.79
Intercept Differences for Sex	8	9	.1696	.1127	.05692	1	1,185	81.23 *
Slope Differences for Ethnicity	10	11	. 1 198	.1146	.00521	1	1,184	7.01 *
Intercept Differences for Ethnicity	11	12	.1146	.1127	.00185	1	1,185	2.48
Algebra 1985 - 1986	Freshile	er. (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1887	.1886	.00001	1	708	0.01
Sex & Ethnicity Interaction Test	2	3	.1886	.1877	. 00099	1	709	0.86
Slope Differences for Sex	7	8	.1833	.1830	.00032	1	712	0.28
Intercept Differences for Sex	8	ý	.1830	.1254	. Ú576U	1	713	50.27 *
Slope Differences for Ethnicity	10	1 :	.1310	.1292	.00185	1	712	1.51
Intercept Differences for Ethnicity	11	12	. 1292	.1254	.00379	1	713	3.10
Algebra 1984 - 1985	Sophomo	ore (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1164	.1160	.00038	1	87	0.37
Sex & Ethnicity Interaction Test	2	3	.1160	.1106	.00541	1	872	5.34
Stope Differences for Sex	7	8	.1095	.1052	. 90433	1	875	4.25
Intercept Differences for Sex	8	9	.1052	.0692	. 03603	1	876	35.27 *
Slope Differences for Ethnicity	10	11	.0695	. 0693	.G0019	1	875	0.18
Intercept Differences for Ethnicity	11	12	.0693	. 0692	.00011	1	876	0.11
Algebra 1985 - 1986	Sophomo	ore (Ethnicity	/= Whit	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1298	.1298	.00001	1	617	0.01
Sex & Ethnicity Interaction Test	2	3	. 1298	. 1279	.00185	1	618	1.32
Slope Differences for Sex	7	8	.1219	.1191	.00279	1	621	1.97
Intercept Differences for Sex	8	9	_1191	. 0932	.02590	1	622	18.29
Slope Differences for Ethnicity	10	11	.0974	.0960	.00139	1	621	٩.96
Intercept Differences for Ethnicity	11	12	.0960	.0932	.00274	1	622	1.88
Algebra 1984 - 1	985 Junia	or (Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1685	.1658	.00266	1	489	1.57
Sex & Ethnicity Interaction Test	2	3	. 1658	. 1648	.00099	1	490	0.58
Slope Differences for Sev	7	8	.1517	. 1500	.00162	1	493	0.94
Intercept Differences for Sex	8	Ç	.1506	. 1030	.04703	1	494	27.34
Slope Differences for Ethnicity	10	11	.1128	. 1062	.00659	1	493	3.66
Intercept Differences for Ethnicity	11	12	.1062	.1030	.00323	1	494	1.79

		Co	mparison		R <sup>2</sup>			·	
F-Test Comparison		Full	Restricted	Full	Restricted	к <sup>2</sup> Change	df <sub>1</sub>	df2	F
	Algebra 1985 - 1986	Junior (Et	hnicity not tes	eted)					<del></del>
Siope Differences for	Sex	7	8	.1165	.1048	.01178	1	273	3.64
Intercept Differences	for Sex	8	9	.1048	.0898	.01496	1	274	4.58
	Algebra 1985 - 198	5 Junior (Et	hnicity = <sup>O</sup> hite	P → Noraih	ite) (Sex not	test <b>ed)</b>			
Slope Differences for	Ethnicity	10	13	.1006	.0951	.00553	1	273	1.68
Intercept Differences	for Ethnicity	11	12	.0951	.0898	.00529	1	274	1.60
	Algebra 1984 - 1985	Senior (Et	hnic ty not te	sted)					
Slope Differences for	Sex	7	8	.1249	.1076	.01731	1	265	5.24
Intercept Differences	for Sex	8	9	.1076	.0573	.05032	1	266	15.00 *
	Algebra 1984 - 198	35 Senior (Et	hnicity : White	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for	Ethnicity	10	11	.0803	.0598	.02046	1	265	5.90
Intercept Differences	for Ethnicity	11	12	.0598	. 0573	.00254	1	266	0.72
	Geometry 1985 - 1986	5 Freshmen (	Ethnicity not	tested)					
Slope Differences for		7	8	.2221	.2221	.00001	1	511	0.01
Intercept Differences		8	9	.2221	.2026	.01948	1	512	12.82 *
Ú	eometry 1985 - 1986 Fi	reshmen (Ethr	ncity = whice.	Ĥlack â	Hispanic) (Se	ex not test	eai)		
Slope Differences for		10	11	.2078	.2041	.00376	2	509	1.21
Intercept Differences	for Ethnicity	11	12	.2041	.2026	.00150	2	511	0.48
	Geometry 1984 - 1985	Sophomore (	Fth, icity not	tested)					
Slope Differences for	•	7	8	. 2382	. 2369	.00131	1	561	0.96
Intercept Differences	for Sex	8	9	. 2369	.2126	.02428	1	562	17.88 *
G	eometry 1984 - 1985 S	ophomore (Eth	nicity = White	, Black &	Hoanic) (S	Sex not tes	ted)		
Slope Differences for	-	19	11	.2223	.2172	.00516	2	559	1.85
Intercept Differences		11	12	.2172	. 2126	.00458	2	561	1.64
	Geometry 1985 - 1986	sophomore (	Ethnicity not	tested)					
Slope Differences for	Sex	,	8	. 2607	. 2604	.00027	1	410	0.15
Intercept Differences		8	9	. 2604	.2150	.04542	1	411	25.24 *
	Geometry 1985 - 1	986 Sophomore	(Ethnicity =	White & 8	ilack) (Sex no	ot tested)			
Slope Differences for		10	11	.2/60	.2312	.01488	1	371	7.32 *
	Geometry 1984 - 19	85 Junior 16	Ethnicity not t	ested)					
Slope Differences for	•	7	8	.2359	.2314	.00450	1	305	1.80
Intercept Differences		8	9	.2314	.1906	.04075	1	306	16.22
	Geometry 1984 - 1	985 Junior (E	thnicity = Whi	te & Non-	white) (Sex h	ot tented)			
Slope Differences for		10	11	. 1966	.1951	.00152	1	305	0.58
Intercept Differences		11	12	. 1951	.1906	.00452	1	306	1.72
inter cape of the chices	io. Commorey	• 1	, _	, , , ,		.50452	•	3.0	

Table 0-7. (Continued)

	Co	mparison	1	2				
-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Geometry 1985 - 1986 Jun	ior (E	thnicity not to	ested)				<del></del>	
loph Differences for Sex	7	8	.2504	.2494	.00097	1	123	0.16
ntencept Differences for Sex	8	9	.2494	.2130	.03638	1	124	6.01
Geometry 1985 - 1986 Ju	mior (E	thnicity = Whi	te & Nonwi	hite) (Sex no	t tested)			
lope Differences for Ethnicity	10	11	.3019	.2585	.04344	1	123	7.65 *
Geometry 1984 - 1985 Ser	iior (E	thnicity not to	ested)					
lupe Differences for Sex	7	8	.2385	.2383	.00015	1	107	0.02
ntercept Differences for Sex	8	9	.2383	.2376	.00077	1	108	0.11
Geometry 1984 - 1985 Se	enior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
lope Differences for Ethnicity	10	11	.2465	.2446	.00194	1	107	0.28
ntercept Differences for Ethnicity	11	12	.2446	.2376	.00700	1	108	1.00
Calculus 1985 - 1986 Jur	nior (E	thnicity not t	ested)					
tipe Differences for Sex	7	8	.0546	.0541	.00047	1	147	0.07
ntercept Differences for Sex	8	9	.0541	.0541	.00004	1	148	0.01
General Science 1984 - 1	1985 Fre	shmen (Ethnic	ity = Whi	te, Black & H	ispanic)			
way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2309	.2268	.00413	2	1,956	5.25 *
ex & Ethnicity Interaction lest	2	3	.2268	.2190	.0077	2	1,958	9.77 *
onsistent Over or Under prediction of Subgroup	2	4	.2268	.2261	.00061	3	1,958	0.51
General Science 1985 - 1986	Freshmo	n (Ethnicity	not teste	d)				
lope Differences for Sex	7	8	.1194	.1173	.00209	1	274	0.65
ntercept Differences for Sex	8	9	.1173	. 1062	.01112	1	275	3.46
General Science 1985 - 198	86 frest	nmen (Ethnicity	= White	ŭ Black) (Sex	nut teste	d)		
lope Differences for Ethnicity	10	11	.1261	.1052	.02093	1	240	5.75
ntercept Differences for Ethnicity	11	12	.1052	.1049	.00034	1	241	0.09
General Science 1984 -	1985 Sop	phomore (Ethni	city = Wh	ite & Norwhit	e)			
way Interaction Test (ASVAB*sex*ethricity)	1	2	.2370	.2361	.00093	1	341	0.42
* & Ethnicity Interaction Tert	2	3	.2360	.2256	.01039	1	342	4.65
tope Elffordrices for Scx	7	8	.2060	.2041	.00198	1	345	0.86
Steriet Differences for Sex	8	9	.2041	, 1529	.05113	1	346	22.23 *
ope Differences for Ethnicity	10	11	.1795	. 1739	.00563	1	345	2.37
ntercept Differences for Ethnicity	11	12	.1739	.1529	.02093	1	346	8.77 *
General Science 1985 - 1985:	Sophomoi	e (Ethnicity	riot teste	ed)				
lope bifferences for Sex	7	8	.1343	, 1339	.00042	1	183	0.09
ntercept Differences for Sex	В	9	.1339	.0987	.03520	1	184	7.48 *
General Science 1985 - 198	6 Sophor	nore (Ethnicity	= White	& Black) (Sex	not teste	d)		
cope Di'i for Ethnicity	10	11	.1603	. 1555	.00480	1	158	0.90
neerce; for the for Ethnicity	11	12	. 1555	.1234	.03209	1	159	6.04

Table 0-7. (Continued)

	Co	mparison		R <sup>2</sup>				F
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	
General Science 1984 - 198	5 Junior	(Ethnicity not	t tested)	<del></del>	<del></del>			
Slope Differences for Sex	7	8	.0910	.0829	-00811	1	174	1.55
Intercept Differences for Sex	8	9	.0829	.0555	.02746	1	175	5.24
General Science 1984 -	1985 Juni	or (Ethnicity :	= White &	Black) (Sex	not tested)	)		
Slope Differences for Ethnicity	10	11	.1223	.1205	.00181	1	149	0.31
Intercept Differences for Ethnicity	11	12	. 1205	.0679	.05261	1	150	8.97
General Science 1985 - 198	36 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2053	.2046	.00054	1	258	0.21
Intercept Differences for Sex	8	9	.2046	.1775	.02710	1	259	8.82
General Science 1985 - 19	86 Junior	(Ethnicity = 1	White & N	onwhite) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	. 1832	.1782	.00494	1	258	1.56
Intercept Differences for Ethnicity	11	12	.1782	.1775	.00069	1	259	0.22
General Science 1984 - 198	35 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1082	.1079	.00027	1	182	0.05
Intercept Differences for Sex	8	9	.1079	.0806	.02734	1	163	5.61
Biology I - II 1984 - 198	5 Freshmer	(Ethnicity n	ot tested	1)				
Slope Differences for Sex	7	8	.2474	.2471	.00021	1	247	0.09
Intercept Differences for Sex	8	9	.2471	.2172	.02991	1	300	11.92
Biology I - II 1984 - 19	85 Freshme	en (Ethnicity =	White &	Nonwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2209	.2172	.00371	1	299	1.42
Intercept Differences for Ethnicity	11	12	.2172	.2172	.00000	1	300	0.00
Biology I - 11 1985	- 1986 Fre	eshmen (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1819	.1818	. იათან	1	1,119	0.07
Sex & Ethnicity Interaction Test	2	3	.1818	.1817	.00013	1	1,120	0.17
Slope Differences for Sex	7	8	.1801	.1801	.00'000	1	1,123	0.00
Intercept Differences for Sex	8	9	.1801	.1366	.0.348	1	1,124	59.60
Slupe Differences for Ethnicity	10	11	.1376	.1374	00020	1	1,123	0.26
Intercept Differences for Ethnicity	11	12	.1374	. 1366	.00081	1	1,124	1.05
Biology 1 - 1! 1984 -	1985 Sopi	nomore (Ethnic	ity = Whi	ite, Black & F	lispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2268	.2265	.00028	2	1,371	0.24
Sex & Ethnicity Interaction Test	2	3	. 2265	.2216	.00489	2	1,373	4.34
Slope Differences for 5:x	7	8	. 1938	. 1895	.00433	1	1,379	7.40
Intercept Differences for Sex	8	9	. 1895	. 1603	.02922	1	1,380	49.75
Slope Differences for Ethnicity	10	11	. 1806	. 1772	.00344	2	1,377	2.89
Intercept Differences for Ethnicity	11	12	.1772	. 1603	.01691	2	1,379	14.17
Biology I - II 1985 - 198	6 Sophomo	re (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.2122	.1998	.01236	1	335	5.26
Intercept Differences for Sex	8	9	.1998	.1308	.06905	1	336	28.99

Table D-7. (Continued)

	Çor	mparison	R	2				
f-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Biology I - II 1985 - 1986 So	phomore (8	Ethnicity = Whi	te, Black	& Hispanic)	(Sex not 1	ested)		
Slope Differences for Ethnicity	10	11	. 1336	. 1315	.00202	2	333	0.39
Intercept Differences for Ethnicity	11	12	.1315	.1308	.00078	2	335	0.15
Biology 1 - 11 1984	- 1985 Jur	nior (Ethnicit	y = White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2368	.2357	.00108	1	397	0.56
Sex & Ethnicity Interaction Test	2	3	.2357	.2357	.00000	1	398	0.00
Slope Differences for Sex	7	3	.2247	.2212	.00356	1	401	1.84
Intercept Differences for Sex	8	9	.2212	.1736	.04758	1	402	24.56 *
Slope Differences for Ethnicity	10	11	.1866	.1846	.00202	1	401	1.00
Intercept Differences for Ethnicity	11	12	.1846	. 1736	.01102	1	402	5.43
Biology I - 11 1985 - 198	6 Junior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.2918	.2811	.01073	1	147	2.23
Intercept Differences for Sex	8	9	.2811	.2127	.06839	1	148	14.03 *
Biology 1 - 11 1984 - 198	5 Senior	(Ethnicity not	tested)					
Stope Differences for Sex	7	8	.3506	.3482	.00241	1	195	0.72
Intercept D fferences for Sex	8	9	.3452	.2986	.04962	1	196	14.92 *
Biology 1 - 11 1984 - 1	985 Senio	r (Ethnicity = )	White & B	Black) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.3462	.3458	.00041	1	176	0.11
Intercept Differences for Ethnicity	11	12	.3458	.3067	-03905	1	177	10.56 *
Chemistry I - II 1985 - 198	6 freshme	n (Ethnicity n	ot testec	4)				
Slope Differences for Sex	7	8	. 1858	.1788	.00703	1	128	1.11
Intercept Differences for Sex	8	9	. 1788	.1331	.04568	1	129	7.18
Chemistry 1 - 11 1984 - 1985	Scphologr	e (Ethnicity n	ot tested	t)				
Slope Differences for Sex	7	8	.1010	.1000	.00103	1	168	0.19
Intercept Differences for Sex	8	9	.1000	.0603	.03971	1	169	7.46
Chemistry 1 - 11 1985 - 1986	Sophomor	e (Ethnicity n	ot tested	3)				
Slope Differences for Sex	7	8	.1.223	.1137	.00861	1	430	4.22
Intercept Differences for Sex	8	9	.1137	.0546	.05908	1	431	28.73
Chemistry I - II 1984 - 19	985 Junior	(Ethnicity no	t tested)	)				
Slope Differences for Sex	7	8	. 1961	. 1946	.00147	1	426	0.78
Intercept Differences for Sex	8	9	. 1946	.1224	.07224	1	427	38.30
Chemistry 1 - 11 1984 - 1	1985 Junio	r (Ethnicity =	₩hite & N	Honwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	. 1429	.1388	.00408	1	426	2.03
Intercept Differences for Ethnicity	11	12	.1388	.1224	.01640	1	427	8.13
Chemistry 1 - 11 1985 - 19	/86 Junior	(Ethnicity no	t tested:	)				
Slope Differences for Sex	7	8	.1672	. 1562	.01096	1	137	1.80
Intercept Differences for Sex	8	9	. 1562	.0747	.08148	1	138	13.33 *

Table D-7. (Continued)

	Com	parison	F	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Chemistry I - 11 1985 - 19	986 Junior	(Ethnicity =	White & )	Vonwhite) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	. 0884	.0884	.00004	1	137	0.01
Intercept Differences for Ethnicity	11	12	.0884	.0747	.01367	1	138	2.07
Chemistry I - II 1984 - 198	35 Senior	(Ethnicity m	ot tested	)				
Slope Differences for Sex	7	8	, 1799	. 1781	.00174	1	156	0.33
Intercept Differences for Sex	8	ç	. 1781	. 1 <i>7</i> 59	.00225	1	157	0.43
Chemistry I - II 1984 - 1	985 Senior	(Ethnicity =	White & I	Nonwhite) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.2129	. 1810	.03190	1	156	6.32
Intercept Differences for Ethnicity	11	12	. 1810	. 1759	.00506	1	157	0.97
Physics I - II 1985 - 198	6 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1174	.1127	.00474	1	232	1.25
Intercept Differences for Sex	8	9	, 1127	.0618	.05093	1	233	13.37 *
Physics I - (1 1984 - 198	5 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	3	. 1842	. 1842	.00002	1	166	0.00
Intercept Differences for Sex	8	9	. 1842	.1130	.07116	1	167	14.57 *
Government & Civics 1984 - 1	985 Freshr	men (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2568	.2517	.00508	1	344	2.35
Intercept Differences for Sex	8	9	. 2517	.2321	.01961	1	345	9.04 *
Government & Civics 1984 - 19	85 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.1312	.1247	.00654	1	155	1.17
Intercept Differences for Sex	8	9	. 1247	.0796	.04514	1	156	8.05 *
Government & Civics 1985 - 19	86 Saphom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	. 7	8	. 1343	.1232	.01110	1	417	5.34
Intercept Differences for Sex	8	9	. 1232	.9832	.03998	1	418	19.06 *
Government & Civics 1985 - 1	986 Sophoi	nore (Ethnicit	v = White	& Hispanic)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	.1115	.1110	.00051	1	388	0.22
Intercept Differences for Ethnicity	11	12	.1110	.0888	.02224	1	389	9.73 *
Government & Civics 1984 - 1	985 Junio	r (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2359	.2298	.00606	1	456	3.62
Intercept Differences for Sex	8	9	. 2298	. 1903	.03749	1	457	23.43 *
Government & Civics 1984 -	1985 Juni	or (Ethnicity	= White &	Nonwhite) (S	iex not t <b>e</b> s	ted)		
Slope Differences for Ethnicity	10	11	. 1964	.1952	.00125	1	456	0.71
Intercept Differences for Ethnicity	11	12	. 1952	. 1903	.00485			

<u>Table D-7</u>. (Continued)

	Co	mparison		R <sup>2</sup>				- i
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Government & Civics 198	5 - 1986	Junior (Ethn	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2529	.2518	.00102	1	707	0.97
Sex & Ethnicity Interaction Test	2	3	.2518	.2515	.00032	1	708	0.30
Slope Differences for Sex	7	s	.2420	.2325	.00952	1	711	8.93 *
Intercept Differences for Sex	8	9	.2325	. 1830	.04948	1	712	45.90 **
Slope Differences for Ethnicity	10	11	. 1905	. 1889	.00158	1	711	1.39
Intercept Differences for Ethnicity	11	12	.1889	.1830	.00588	1	712	5.16
Government & Civics 198	4 - 1985	Senior (Ethn	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2433	.2429	.00040	1	602	0.32
Sex & Ethnicity Interaction Test	2	3	.2429	.2423	.00052	1	603	0.42
Stope Differences for Sex	7	8	. 2305	.2300	.00047	1	606	0.37
Intercept Differences for Sex	8	9	.2300	. 2063	.02368	1	607	18.67 **
Slope Differences for Ethnicity	10	11	.2183	.2174	.00091	1	606	0.70
Intercept Differences for Ethnicity	11	12	.2174	. 2063	.01107	1	607	8.58 *
History 1924 - 1985	freshme	n (Ethnicity	= White,	Black & Hispa	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2689	. 2682	.00067	2	1,319	0.60
Sex & Ethnicity Interaction Test	2	3	.2682	.2661	.00207	2	1,321	1.87
Slope Differences for Sex	7	8	.2636	.2629	.00077	1	1,327	1.39
Intercept Differences for Sex	8	9	.2629	.2130	.04986	1	1,328	29.83 **
Slope Differences for Ethnicity	10	11	.2198	.2157	.00405	2	1,325	3.44
Intercept Differences for Ethnicity	11	12	.2157	.2130	.00272	2	1,327	2.30
History 1985 - 1986	Freshme	n (Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2422	.2422	.00004	1	1,343	0.07
Sex & Ethnicity Interaction Test	2	3	.2422	.2418	.00042	1	1,344	0.74
Slope Differences for Sex	7	8	.2412	. 2405	.00^70	1	1,347	1.25
Intercept Differences for Sex	8	9	.2405	.2193	.02114	1	1,348	37.51 **
Slope Differences for Ethnicity	10	11	.2199	.2194	.00047	1	1,347	0.81
Intercept Differences for Ethnicity	11	12	.2194	.2193	.00006	1	1,348	0.10
History 1984 - 1985	Sophemo	ore (Ethnicity	= White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2429	.2428	.00014	1	1,430	0.26
Sex & Ethnicity Interaction Test	2	3	. 2428	.2415	.00125	1	1,431	2.36
Slope Differences for Sex	7	8	.2403	.2398	.00052	1	1,434	0.97
Intercept Differences for Sex	8	9	.2398	.2055	.03430	1	1,435	64.74 *
Slope Differences for Ethnicity	10	11	.2075	. 2074	.00004	1	1,434	0.08
Intercept Differences for Ethnicity	11	12	.2074	.2055	.00191	1	1,435	3.45
History 1985 - 1986	Sophomo	ore (Ethnicity	= White,	, Black & Hisp	panic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2067	.2062	.00041	2	1,465	0.38
Sex & Ethnicity Interaction Test	2	3	.2062	.2008	.00547	2	1,467	5.06 *
Slope Differences for Sex	7	8	. 1899	.1861	.00381	1	1,473	6.94 *
Intercept Differences for Sex	8	9	. 1861	.1336	.05248	1	1,474	95.05 *
Slope Differences for Ethnicity	10	11	. 1490	.1428	.00621	2	1,471	5.37 *
Intercept Differences for Ethnicity	11	12	.1428	.1336	.00918	2	1,473	7.89 *

Table D-7. (Continued)

	Com	parison		ę <sup>2</sup>				
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Mistory 1984 - 19	85 Junior	(Ethnicity	= White &	Black)				· · · · · · · · · · · · · · · · · · ·
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2683	.2679	.00043	1	1,102	0.65
Sex & Ethnicity Interaction Test	2	3	.2679	.2672	.00069	1	1,103	1.04
Slope Differences for Sex	7	8	.2657	.2635	.00221	1	1,106	3.33
Intercept Differences for Sex	8	9	. 2635	.2098	.05372	1	1,107	80.74 **
Slope Differences for Ethnicity	10	11	.2127	.2126	.0000	1	1,106	0.11
Intercept Differences for Ethnicity	11	12	.2127	.2098	.00287	1	1,107	4.03
History 1985 - 1986 Jun	ior (Eth	nicity not te	sted)					
Slope Differences for Sex	7	8	.2017	. 1904	.01133	1	428	6.07
Intercept Differences for Sex	8	9	. 1904	.1352	.05517	1	429	29.23 *1
Kistory 1985 - 1986	Junior (E	thnicity = Wh	ite & Bla	ck) (Sex not	test <b>ed</b> )			
Slope Differences for Ethnicity	10	11	.1367	. 1359	.00076	1	409	0.36
Intercept Differences for Ethnicity	11	12	. 1359	.1311	.00482	1	410	2.29
History 1984 - 1985 Ser	nior (Eth	nicity not te	sted)					
Slope Differences for Sex	7	8	.3101	.3041	.00603	1	423	3.70
Intercept Differences for Sex	8	9	.3041	.2846	.01949	1	424	11.88 **
History 1984 - 1985	Senior (E	thnicity = Wh	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.3358	.3302	.00559	1	402	3.38
Intercept Differences for Ethnicity	11	12	.3302	.3053	.02485	1	403	14.95 **
foreign Language 1984 - 1985	Freshmer	(Ethnicity	not teste	·d)				
Slope Differences for Sex	7	8	.2334	.2327	.00075	1	1,012	0.99
Intercept Differences for Sex	9	9	.2327	.1600	. 07271	1	1,013	95.99 **
Foreign Language 1984 - 1985 fi	eshmen (0	thnicity = Wh	nite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.1777	.1759	.00179	2	1,010	1.10
Intercept Differences for Ethnicity	11	12	.1759	. 1600	.01594	2	1,012	9.79 **
Foreign Language 1985 - 1986	5 Freshmer	n (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.1610	. 1568	.00414	1	797	3.94
Intercept Differences for Sex	8	9	.1568	.0978	.05905	1	798	55.89 **
foreign Language 1985 - 1986 Fi	reshmen (i	Ethnicity = W	nite, Blac	:k & Hispanic;	) (Sex not	tested	1)	
Slope Differences for Ethnicity	10	11	.1121	.1037	.00839	2	795	3.76
Intercept Differences for Ethnicity	11	12	.1037	.0978	.00590	2	<b>79</b> 7	2.62
Foreign Language 1984 - 1985	Sophomore	e (Ethnicity	not teste	ed)				
Slope Differences for Sex	. 7	8	.2016	. 1973	.00430	1	892	4.81
Intercept Differences for Sex	8	9	.1973	.0924	. 10491	1	893	
Foreign Language 1984 - 1985 Si	ophomore :	(Ethnicity = 1	Jhite, Bla	ack & Hispanio	c) (Sex not	teste	ed)	
Slope Differences for Ethnicity	10	11	.1080	.1015	.00651	2	890	3.25
Intercept Differences for Ethnicity	11	12	.1015	.0924	.00910	2	892	4.52
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Table D-7. (Continued)

	Cor	mparison	1	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	f
Foreign Language 1985 -	1986 Soj	ohomore (Ethni	city = W	hite & Norwhi	te)		-	
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1555	. 1551	.00048	1	604	0.35
Sex & Ethnicity Interaction Test	2	3	. 1551	. 1551	.00000	1	605	0.00
Slope Differences for Sex	7	8	. 1419	.1400	-00191	1	608	1.35
Intercept Differences for Sex	8	9	.1400	.0658	.07426	1	609	52.58 **
Slope Differences for Ethnicity	10	11	. 0763	.0763	.00002	1	808	0.01
Intercept Differences for Ethnicity	11	12	. 0763	.0658	.01055	1	609	6.96 *
Foreign Language 1984 - 198	35 Junior	(Ethnicity no	ot tested	)				
Slope Differences for Sex	7	8	.2032	.2022	.00101	1	480	0.61
Intercept Differences for Sex	8	9	. 2022	.1019	.10027	1	481	60.46 **
Foreign Language 1984 - 1985 .	lunior (E	thnicity = Whit	te, Black	& Hispanic)	(Sex not to	ested)		
Stope Differences for Ethnicity	10	1;	. 1233	.1219	.00134	2	478	0.37
Intercept Differences for Ethnicity	11	12	- 1219	. 1019	.01999	2	480	5.46 *
Foreign Language 1985 - 198	36 Junior	(Ethnicity no	ot tested	)				
Slope Differences for Sax	7	8	. 1931	. 1873	.00580	1	247	1.78
Intercept Differences for Sex	8	9	. 1873	.1167	.07062	1	248	21.55 *1
Foreign Language 1985 - 19	986 junio	r (Ethnicity =	White &	Hispanic) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.0843	.0729	.01143	1	205	2.56
Intercept Differences for Ethnicity	11	12	.0729	.0709	.00202	1	206	0.45
Foreign Language 1984 - 198	35 Senior	(Ethnicity n	ot tested	1)				
Slope Differences for Sex	7	8	. 1533	.1530	.00033	1	224	0.09
Intercept Differences for Sex	8	9	. 1530	.1222	.03077	1	225	8.17 *
Foreign Language 1984 - 19	985 Senio	r (Ethnicity =	White &	Hispanic) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.0726	.0702	.00240	1	185	0.48
Intercept Differences for Ethnicity	11	12	.0702	.0655	.00471	1	186	0.94
Secretary & Office Education 198	85 - 1986	Junier (Ethni	city = Wh	ite & Nonwhit	e) (Sex no	t test	ed)	
Slope Differences for Ethnicity	10	11	. 1148	.1140	.00083	1	215	0.20
Intercept Differences for Ethnicity	11	12	.1140	.1139	.00011	1	216	0.03
Secretary & Office Education 198	84 - 1985	Senior (Ethni	city = Wh	nite & Nonwhit	e) (Sex no	t test	ed)	
Slope Differences for Ethnicity	10	11	.0999	.0913	.00861	1	220	2.10
Intercept Differences for Ethnicity	11	12	.0913	.0851	.00628	1	221	1.53
Typing & Word Processing 1984 -	1985 Fre	shmen (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	E	.2270	.2255	.00155	1	507	1.02
Intercept Differences for Sex	8	9	.2255	.2051	.02039	1	508	13.37 *
Typing & Word Processing 1984	∙1yc3 Fre	shmen (Ethnici	ty = Whit	re, Black & Ri	ispanic) (S	ex not	tested)	
Slope Differences for Ethnicity	10	11	.2093	.2056	.00373	2	505	1.19
Intercept Differences for Ethnicity	11	12	. 2056	. 2051	.00053	2	507	0.17

<u>Yable D-7</u>. (Continued)

	Cor	nparison	1	, 2				<del></del> `
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Typing & Word Processing 1985 -	1986 Fre	shmen (Ethnici	ty not to	ested)	<del></del>			
Slope Differences for Sex	7	8	.1797	.1792	.00058	1	492	0.35
Intercept Differences for Sex	8	9	.1 <b>79</b> 2	.1358	.04339	1	493	26.06 **
Typing & Word Processing 1985-	1986 Fre	shmen (Ethnicit	y = White	e & Hispanic)	(Sex not	tested)		
Slope Differences for Ethnicity	10	11	.1370	.1326	.00444	1	445	2.29
Intercept Differences for Ethnicity	11	12	.1326	.1280	.00455	1	446	2.34
Typing & Word Processing 1984 - 1	1985 <b>S</b> oph	omore (Ethnic	ity not t	est <b>e</b> d)				
Slope Differences for Sex	7	8	.1839	. 1876	.00130	1	631	1.01
Intercept Differences for Sex	8	9	.1876	. 1282	.05943	1	632	46.23 **
Typing & Word Processing 1984-1	1985 Soph	omore (Ethnici:	ty = Whit	e, Black & Hi	spanic) (S	ex riot	tested)	
Slope Differences for Ethnicity	10	11	.1313	. 1292	.00213	2	629	0.77
Intercept Differences for Ethnicity	11	12	.1292	.1282	.00104	2	631	0.38
Typing & Word Processing 1985 - 1	1986 Sopin	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.1651	. 1550	.01003	1	405	4.86
Intercept Differences for Sex	8	9	.1550	.1329	.02213	1	406	10.63 *
Typing & Word Processing 1985-1	1986 Soph	omore (Ethnici	ty = Whit	e & Black) (S	ex not tes	ted)		
Slope Difference, for Ethnicity	10	11	.1277	. 1269	.00072	1	374	0.31
Intercept Differences for Ethnicity	11	12	.1269	. 1254	.00157	1	375	0.67
Typing & Word Processing 1984 -	- 1985 Ju	nior (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	.2247	. 2199	.00481	1	391	2.43
Intercept Differences for Sex	8	9	.2199	. 1265	.09336	1	392	46.91 **
Typing & Word Processing 1984	6-1985 Ju	nior (Ethnicit	y = White	e & Black) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.1350	. 1347	.00036	1	359	0.15
Intercept Differences for Ethnicity	ii	12	.1347	.1290	.00483	1	360	2.02
Typing & Word Processing 1985	- 1986 Ju	nior (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	. 1574	. 1525	.00492	1	221	1.29
Intercept Differences for Sex	8	9	. 1525	.0925	.06002	1	222	15.72 **
Typing & Word Processing 1989	5-1986 Ju	nior (Ethnicit	y = White	& Nonwhite)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	.1188	.1046	.01416	1	221	3.55
Intercept Differences for Ethnicity	11	12	.1046	.0925	.01214	1	222	3.01
Typing & Word Processing 1984	- 1985 Se	nior (Ethnici	ty not te	ested)				
Slope Differences for Sex	7	8	. 1765	. 1757	.00073	1	216	0.19
Intercept Differences for Sex	8	9	. 1757	. 1354	.04035	1	217	10.62 *
Accounting/Bookkeeping 1985 -	1986 Sopt	omore (Ethnic	ity not t	tested)				
Stope Differences for Sex	7	8	.2022	. 1952	.00696	1	311	2.71
Intercept Differences for Sex	8	9	, 1952	. 1268	.06843	1	312	26.53 **

<u>Table D-7</u>. (Continued)

Accounting/Bookkeeping 1985 - 1986 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8		Com	parison	1	R <sup>2</sup>				
Stope Differences for Sex	F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Accounting/Bookkeeping 1985 - 1986 Junior   (Ethnicity not tested)	Accounting/Bookkeeping 1984 -	1985 Juni	or (Ethnicity	not tes	ted)				
Accounting/Bookkeeping 1985 - 1986 Junior (Ethnicity not tested)	Slope Differences for Sex	7	8	.2763	.2720	.00437	1	239	1.44
Stope Differences for Sex	Intercept Differences for Sex	8	9	.2720	.1426	. 12938	1	240	42.65 **
Accounting/Bookkeeping 1984 - 1985   Senior   (Ethnicity not tested)	Accounting/Bookkeeping 1985 -	1986 Juni	or (Ethnicit	y not tes	ted)				
Accounting/Bookkeeping 1984 - 1985 Senior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1788 .1786 .00024 1 247 0.07 Intercept Differences for Sex 8 9 .1786 .1218 .05682 1 248 17.16 *  Home Economics 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .2134 .2128 .00061 1 547 0.43 Intercept Differences for Sex 8 9 .2128 .1550 .05781 1 548 40.24 *  Home Economics 1984-1985 Freshmen (Ethnicity = White & Black) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2177 .2162 .00150 1 519 1.00 Intercept Differences for Ethnicity 11 12 .2162 .1449 .07133 1 520 47.32**  Home Economics 1985 - 1986 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .1837 .1831 .00058 1 312 0.22 Intercept Differences for Sex 8 9 .1831 .1044 .07871 1 315 30.16 *  Home Economics 1985-1986 Freshmen (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Sex 8 9 .1831 .1044 .07871 1 315 30.16 *  Home Economics 1985-1986 Freshmen (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 12 .1094 .1044 .00501 1 313 1.76  Home Economics 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Ethnicity 11 1 12 .1094 .1044 .00501 1 313 1.76  Home Economics 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 8 9 .2053 .2053 .00003 1 321 0.01 Intercept Differences for Ethnicity 10 11 .1664 .1595 .00692 1 322 2.67 Intercept Differences for Ethnicity 11 1 2 .1094 .1044 .00301 1 322 0.78  Home Economics 1984-1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 1 2 .1595 .2069 .07844 1 322 31.78 *  Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 1 2 .1974 .0037 .0037 1 394 0.58  Intercept Differences for Ethnicity 11 1 2 .0971 .0037 .0070 1 395 305 3.676 *  Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 1 12 .0971 .0037 .0071 .0037 1 395 0.599	Slope Differences for Sex	7	8	.1127	.1061	.00659	1	185	1.37
None Economics 1985 - 1986 Freshmen (Ethnicity not tested)   Slope Differences for Sex   7 8 .2134 .2128 .00061 1 247 0.07	Intercept Differences for Sex	8	9	.1061	. 0551	.05097	1	186	10.61 *
Home Economics 1984 - 1985 Freshmen (Ethnicity not tested)   Slope Differences for Sex	Accounting/Bookkeeping 1984 -	1985 Seni	or (Ethnicit	y not tes	ted)				
Name Economics 1984 - 1985 Freshmen (Ethnicity not tested)   Slope Differences for Sex   7	Slope Differences for Sex	7	8	.1788	.1786	.00024	1	247	0.07
Slope Differences for Sex	Intercept Differences for Sex	8	9	.1786	.1218	.05682	1	248	17.16 **
Name   Economics   1985 - 1986   Freshmen   (Ethnicity = White & Black)   (Sex not tested)	Home Economics 1984 - 1985	Freshmen	(Ethnicity n	ot tested	)				
Home Economics 1984-1985 Freshmen (Ethnicity = White & Black) (Sex not tested)   Slope Differences for Ethnicity   10	Slope Differences for Sex	7	8	.2134	.2128	.00061	1	547	0.43
Stope Differences for Ethnicity   10	Intercept Differences for Sex	8	9	.2128	. 1550	.05781	1	548	40.24 **
Intercept Differences for Ethnicity	Hame Economics 1984-1985	Freshmen	(Ethnicity =	⊌hite & B	lack) (Sex no	t tested)			
Home Economics 1985 - 1986 Freshmen (Ethnicity not tested)   Slope Differences for Sex   7	Slope Differences for Ethnicity	10	11	.2177	.2162	.00150	1	519	1.00
Stope Differences for Sex	Intercept Differences for Ethnicity	11	12	.2162	. 1449	.07133	1	520	47.32**
Home Economics 1985 - 1986   Sophomore   (Ethnicity = White & Nonwhite)   (Sex not tested)	Home Economics 1985 - 1986	Freshmen	(Ethnicity n	ot tested	)				
Home Economics 1985-1986 Freshmen (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity	Slope Differences for Sex	7	8	. 1837	.1831	.00058	1	312	0.22
Stope Differences for Ethnicity   10	Intercept Differences for Sex	8	9	.1831	.1044	.07871	1	313	30.16 **
Home Economics 1984 - 1985 Sophomore (Ethnicity not tested)   Slope Differences for Sex   7	Home Economics 1985-1986	Freshmen	(Ethnicity =	White & N	onwhite) (Sex	not teste	d)		
Home Economics 1984 - 1985 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .2053 .2053 .00003 1 321 0.01 Intercept Differences for Sex 8 9 .2053 .1269 .07844 1 322 31.78 *  Home Economics 1984-1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1664 .1595 .00692 1 321 2.67 Intercept Differences for Ethnicity 11 12 .1595 .1269 .03263 1 322 12.50**  Home Economics 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1740 .1727 .00122 1 394 0.58 Intercept Differences for Sex 8 9 .1727 .0957 .07699 1 395 36.76 *  Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0975 .0971 .00037 1 394 0.16 Intercept Differences for Ethnicity 11 12 .0971 .0957 .00135 1 395 0.59  Home Economics 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1468 .1467 .00009 1 277 0.033	Slope Differences for Ethnicity	10	11	.1105	. 1094	.00107	1	312	0.37
Slope Differences for Sex   7   8   .2053   .2053   .00003   1   321   0.01	intercept Differences for Ethnicity	11	12	.1094	.1044	.00501	1	313	1.76
Home Economics 1984-1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)   Stope Differences for Ethnicity	Home Economics 1984 - 1985	Sophomore	Ethnicity	not teste	·d)				
Home Economics 1984-1985 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1664 .1595 .00692 1 321 2.67 Intercept Differences for Ethnicity 11 12 .1595 .1269 .03263 1 322 12.50**  Home Economics 1985 - 1986 Sophomore (Ethnicity not tested)  Slope Differences for Sex 7 8 .1740 .1727 .00122 1 394 0.58 Intercept Differences for Sex 8 9 .1727 .0957 .07699 1 395 36.76 *  Mome Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0975 .0971 .00037 1 394 0.16 Intercept Differences for Ethnicity 11 12 .0971 .0957 .00135 1 395 0.59  Home Economics 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1468 .1467 .00009 1 277 0.03	Slope Differences for Sex	7	8	. 2053	.2053	.00003	1	321	0.01
Stope Differences for Ethnicity   10	Intercept Differences for Sex	8	9	.2053	.1269	.07844	1	322	31.78 **
Home Economics 1985 - 1986 Sophomore (Ethnicity not tested)   Stope Differences for Sex   7   8   .1740   .1727   .00122   1   .394   0.58     Intercept Differences for Sex   8   9   .1727   .0957   .07699   1   .395   .36.76     Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)   Stope Differences for Ethnicity   10   11   .0975   .0971   .00037   1   .394   0.16     Intercept Differences for Ethnicity   11   12   .0971   .0957   .00135   1   .395   0.59     Home Economics 1984 - 1985 Junior (Ethnicity not tested)   Stope Differences for Sex   7   8   .1468   .1467   .00009   1   .277   0.033	Home Economics 1984-1985	Sophomore	(Ethnicity =	White & N	lonwhite) (Sex	not teste	d)		
Home Economics 1985 - 1986 Sophomore (Ethnicity not tested)  Stope Differences for Sex 7 8 .1740 .1727 .00122 1 394 0.58 Intercept Differences for Sex 8 9 .1727 .0957 .07699 1 395 36.76 *  Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Stope Differences for Ethnicity 10 11 .0975 .0971 .00037 1 394 0.16 Intercept Differences for Ethnicity 11 12 .0971 .0957 .00135 1 395 0.59  Home Economics 1984 - 1985 Junior (Ethnicity not tested)  Stope Differences for Sex 7 8 .1468 .1467 .00009 1 279 0.03	Slope Differences for Ethnicity	10	11	.1664	. 1595	.00692	1	321	2.67
Stope Differences for Sex   7   8   .1740   .1727   .00122   1   .394   0.58	Intercept Differences for Ethnicity	11	12	. 1595	.1269	.03263	1	322	12.50**
Intercept Differences for Sex   8   9   .1727   .0957   .07699   1   395   36.76 **   Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)   Slope Differences for Ethnicity   10   11   .0975   .0971   .00037   1   394   0.16     Intercept Differences for Ethnicity   11   12   .0971   .0957   .00135   1   395   0.59     Home Economics 1984 - 1985 Junior (Ethnicity not tested)   Slope Differences for Sex   7   8   .1468   .1467   .00009   1   277   0.03	Home Economics 1985 - 1986	Sophomore	e (Ethnicity	not teste	ed)				
Home Economics 1985-1986 Sophomore (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .0975 .0971 .00037 1 394 0.16 Intercept Differences for Ethnicity 11 12 .0971 .0957 .00135 1 395 0.59  Home Economics 1984 - 1985 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .1468 .1467 .00009 1 277 0.03	Slope Differences for Sex	7	8	.1740	.1727	.00122	1	394	0.58
Slope Differences for Ethnicity       10       11       .0975       .0971       .00037       1       394       0.16         Intercept Differences for Ethnicity       11       12       .0971       .0957       .00135       1       395       0.59         Home Economics 1984 - 1985 Junior       (Ethnicity not tested)         Slope Differences for Sex       7       8       .1468       .1467       .00009       1       277       0.03	Intercept Differences for Sex	8	9	.1727	.0957	.07699	1	<b>39</b> 5	36.76 **
Intercept Differences for Ethnicity 11 12 .0971 .0957 .00135 1 395 0.59  **Home Economics 1984 - 1985 Junior** (Ethnicity not tested)  Slope Differences for Sex 7 8 .1468 .1467 .00009 1 279 0.03	Home Economics 1985-1986	Sophomore	(Ethnicity =	White & N	lonwhite) (Sex	not teste	d)		
Home Economics 1984 - 1985 Junior (Ethnicity not tested)   Slope Differences for Sex   7 8 .1468 .1467 .00009 1 279 0.03	Slope Differences for Ethnicity	10	11	.0975	.0971	.00037	1	394	0.16
Slope Differences for Sex         7         8         .1468         .1467         .00009         1         .279         0.03	Intercept Differences for Ethnicity	11	12	.0971	.0957	.00135	1	395	0.59
· ·	Home Economics 1984 - 198	5 Junior	(Ethnicity no	t tested)	•				
Intercept Differences for Sex 8 9 .1467 .1019 .04476 1 280 14.69 1	Slope Differences for Sex	7	8	. 1468	. 1467	.00009	1	277	0.03
	Intercept Differences for Sex	8	9	.1467	.1019	.04476	1	280	14.69 *

<u>Table 0-7</u>. (Concluded)

	Con	nparison		<sub>2</sub> 2				
F-Test Comparison	Full	Restricted	full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economic	s 1984-1985 Junior (F	thnicity = Wh	ite & None	white) (Sex n	ot tested)			<del></del> · .
Slope Differences for Ethnicity	10	11	.1060	.1058	.00013	1	279	0.04
Intercept Differences for Ethnicity	11	12	.1058	.1019	.00392	1	280	1.23
Home Economics	1985 - 1986 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1958	. 1958	.00001	1	358	0.01
Intercept Differences for Sex	8	9	. 1958	.0563	.13944	1	359	62.24 **
Home Economic	s 1985-1986 Junior (8	thnicity = Wh	ite & Non	⊌hite) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.0622	.0606	.00153	1	358	0.58
Intercept Differences for Ethnicity	11	12	.0606	.0563	.00430	1	359	1.64
Home Economics	1984 - 1985 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1693	. 1689	.00039	1	318	0.15
Intercept Differences for Sex	8	9	. 1689	.1112	.05 <b>768</b>	i	319	22.14 **
Home Economi	cs 1984-1985 Senior	(Ethnicity = W	hite & No	nwhite) (Sex	not test <b>e</b> d;	)		
Slope Differences for Ethnicity	10	11	.1172	.1120	.00522	1	318	1.88
Intercept Differences for Ethnicity	11	12	.1120	.1112	.00089	1	319	0.29
Computer Programmir	ig 1985 - 1986 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2290	.2290	.00001	1	227	0.00
Intercept Differences for Sex	8	9	.2290	.1254	.10361	1	228	30.64 **
Computer Program	ning 1984 - 1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2620	.2584	.00359	1	240	1.17
Intercept Differences for Sex	8	9	.2584	.2061	.05230	1	241	17.00 **
Computer Program	ning 1985 - 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.3000	.2997	.00034	1	157	0.08
Intercept Differences for Sex	8	9	.2997	. 1497	.15001	1	158	33.84 **
Computer Programm	ning 1984 - 1985 Seni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.1484	. 1459	.00248	1	152	0.44
Intercept Differences for Sex	8	9	.1459	.1458	.00015	1	153	0.03

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

Table D-8. F-Tests of Significance for AFQT Composite

	Cor	mparis	on	F	2				
F-Test Comparison	Full	Rest	ricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
English I - IV 1984 - 19	85 Fre	shmen	(Ethnici	ty = Whit	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.2590	. 2580	.00096	2	2,422	1.57
Sex & Ethnicity Interaction Test	2		3	.2580	. 2533	.00472	2	2,424	7.72 **
Consistent Over or Under prediction of Subgroup	2		4	.2580	. 2554	.00261	3	2,424	2.84
English I - IV 1985 - 19	86 Fre	shmen	(Ethnici	ty = Whit	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.2114	.2098	.00167	2	1,989	2.11
Sex & Ethnicity Interaction Test	2		3	.2098	.2072	.00259	2	1,991	3.26
Slope Differences for Sex	7		8	.1995	. 1993	.00020	1	1,997	0.64
Intercept Differences for Sex	8		9	. 1993	. 1665	.03273	1	1,998	81.67 *
Slope Differences for Ethnicity	10		11	.1728	. 1677	.00508	2	1,995	6.12 *
Intercept Differences for Ethnicity	11		12	.1677	. 1665	.00119	.2	1,997	1.42
English I - IV 1984 - 198	5 Soph	omore	(Ethnici	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.2806	. 2805	.00006	2	2,296	0.10
Sex & Ethnicity Interaction Test	2		3	.2905	. 2789	.00164	2	2,298	2.62
Slope Differences for Sex	7		8	.2787	.2724	.00635	1	2,304	20.27 *
Slope Differences for Ethnicity	10		11	.2258	. 2255	.00035	2	2,302	0.52
Intercept Differences for Ethnicity	11		12	. 2255	.2248	.00071	2	2,304	1.06
English I - IV 1985 - 198	Só Soph	omore	(Ethnic	ity = ⊌hí:	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	. 2554	. 2539	.00148	2	1,942	1.93
Sex & Ethnicity Interaction Test	2		3	. 2539	.2528	.00111	2	1,944	1.44
Slope Differences for Sex	7		8	. 2481	. 2407	.00734	1	1,950	19.03 *
Slope Differences for Ethnicity	10		11	. 1923	. 1913	.00107	2	1,948	1.29
Intercept Differences for Ethnicity	11		12	. 1913	. 1856	.00570	2	1,950	6.87 *
English I - IV 1984 - 1	1985 Ju	ınior	(Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.2603	.2601	.00019	2	1,721	0.23
Sex & Ethnicity Interaction Test	2		3	.2601	.2597	.00039	2	1,723	0.45
Slope Differences for Sex	7		8	.2573	. 2499	.00741	1	1,729	17.24 *
Slope Differences for Ethnicity	10		11	. 1803	. 1792	.00107	2	1,727	1.12
Intercept Differences for Ethnicity	11		12	. 1792	. 1774	.00177	2	1,729	1.87
English ! - IV 1985 - 1	1986 Ju	ınior	(Ethnici	ty = Whit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	. 2279	.2277	.00013	1	1,258	0.21
Sex & Ethnicity Interaction Test	2		3	. 2277	.2277	.00007	1	1,259	0.11
Slope Differences for Sex	7		8	. 2276	.2205	.00709	1	1,262	11.58 *
Slope Differences for Ethnicity	10		11	. 1420	.1420	.00000	1	1,262	0.01
Intercept Differences for Ethnicity	11		12	. 1420	. 1418	.00015	1	1,263	0.23
English 1 • 1V 1984 - 1	1985 Sc	nior	(Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.2117	.2100	.00168	2	1,275	1.36
Sex & Ethnicity Interaction Test	2		3	.2100	.2092	.00082	2	1,277	0.66
Slope Differences for Sex	7		8	.2012	. 1984	.00285	1	1,283	4.57
Intercept Differences for Sex	8		9	. 1984	. 1720	.02637	1	1,284	42.23
Slope Differences for Ethnicity	10		11	.1770	. 1721	.00493	2	1,281	3.84
Intercept Differences for Ethnicity	11		12	. 1721	.1720	.00010	2	1,283	0.08
•									

Table D-B. (Continued)

	Compa	rison	5	2		·		
F-Test Comparison	Full R	estricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Math 1984 -	1985 Freshme	n (Ethnici	ty = White	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0818	.0811	.00072	2	1,167	0.45
Sex & Ethnicity Interaction Test	2	3	.0811	.0773	.00376	2	1,169	2.39
Slope Differences for Sex	7	8	.0750	.0740	.00099	1	1,175	1.26
Intercept Differences for Sex	8	9	.0740	.0659	.00809	1	1,176	10.28
Slope Differences for Ethnicity	10	11	.0689	.0689	.00002	2	1,173	0.02
Intercept Differences for Ethnicity	11	12	.0689	.0659	.00295	2	1,175	1.86
General Math 1985 -	1986 Freshme	n (Ethnici:	ty = White	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0347	.0347	.00001	1	549	0.00
Sex & Ethnicity Interaction Test	2	3	.0347	.0325	.00217	1	550	1.24
Slope Differences for Sex	7		0259	.0223	.00358	1	553	2.03
Intercept Differences for Sex	8	9	.0223	.0165	.00583	1	554	3.31
Slope Differences for Ethnicity	10	11	.0239	.0174	.00643	1	553	3.64
Intercept Differences for Ethnicity	11	12	.0174	.0165	.00096	1	554	0.54
General Math 1984 -	1985 Sophomo	re (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0795	.0782	.00132	2	736	0.53
Sex & Ethnicity Interaction Test	2	3	.0782	.0711	.00703	2	738	2.81
Slope Differences for Sex	7	8	.0593	.0590	.00029	1	744	0.23
Intercept Differences for Sex	8	9	.0590	.0559	.00306	1	745	2.42
Slope Differences for Ethnicity	10	11	.0680	. 0653	.00271	2	742	1.08
Intercept Differences for Ethnicity	11	12	.0653	. 0559	.00935	2	744	3.72
General Math 1985 -	1986 Sophomo	ore (Ethnic	ity = Whi	te & \$lack)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1072	. 1003	.00683	1	305	2.33
Sex & Ethnicity Interaction Test	2	3	.1003	.0979	.00242	1	306	0.82
Slope Differences for Sex	7	3	.0817	.0813	.00040	1	309	0.14
Intercept Differences for Sex	8	9	.0813	.0464	.03484	1	310	11.76 1
Slope Differences for Ethnicity	10	11	.0615	. 0602	.00139	1	309	0.46
Intercept Differences for Ethnicity	11	12	.0602	.0464	.01373	1	310	4.53
General Math 1984	- 1985 Junior	(Ethnicit	y = White	& Black)				
3-way Interaction Test (ASVA3*sex*ethnicity)	1	2	.0590	. 0573	.00178	1	266	0.50
Sex & Ethnicity Interaction Test	2	3	.0573	. 0572	.00007	. 1	267	0.02
Slope Differences for Sex	7	8	.0529	. 0515	.00139	1	270	0.40
Intercept Differences for Sex	8	9	.0515	. 0269	.02468	1	271	7.05
Slope Differences for Ethnicity	10	11	.0302	.0299	.00026	1	270	0.07
Intercept Differences for Ethnicity	11	12	.0299	.0269	.00306	1	271	0.85
General Math 1985 - 198	6 Junior (E	thnicity not	tested)					
Slope Differences for Sex	7	8	. 1252	. 1236	.00166	1	222	0.42
Intercept Differences for Sex	8	9	. 1236	.0998	.02379	1	223	6.05

Iable D-8. (Continued)

	Co	mparison		2	•		df2	<del>-</del>
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Cnange	df1		F
General Math 1985 - 1986	Junior	(Ethnicity = W	hite & Bl	ack) (Sex not	tested)			
Slope Differences for Ethnicity	16	11	.1230	.1186	.00446	1	195	0.99
Intercept Differences for Ethnicity	11	12	.1186	1165	.00208	1	196	0.46
General Math 1984 - 1985	Senior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.0843	.0806	.00368	1	230	0.93
Intercept Differences for Sex	8	9	.0806	.0804	.00020	1	231	0.05
General Math 1984 - 198	5 Senior	(Ethnicity =	White & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.1204	.1195	.00084	1	203	0.19
Intercept Differences for Ethnicity	11	12	.1195	.0994	.02016	1	204	4.67
Algebra 1984 - 1985	Freshme	en (Ethnicity	≖ White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1995	. 1935	.00607	1	1,180	8.94 *
Sex & Ethnicity Interaction Test	2	3	. 1935	. 1934	.00002	1	1,181	0.02
Slope Differences for Sex	7	8	.1899	.1877	.00222	1	1, 184	3.25
Intercept Differences for Sex	8	ç	.1877	. 1503	.03744	1	1, 185	54.63 *
Slope Differences for Ethnicity	10	11	.1584	.1540	.00442	1	1, 184	6.22
Intercept Differences for Ethnicity	11	12	.1540	. 1503	.00368	1	1,185	5.15
Algebra 1985 - 1986	Freshme	en (Ethnicity	= White &	Nonwhite)				
3-way interaction lest (ASVAB*sex*ethnicity)	1	2	.2017	.2016	.00002	1	708	\$0.02
Sex & Ethnicity Interaction Test	2	3	.2016	. 1999	.00173	1	709	1.54
Slope Differences for Sex	7	8	. 1973	. 1972	.00003	1	712	0.03
Intercept Differences for Sex	8	9	.1972	. 1595	.03772	1	713	33.50 *
Slope Differences for Ethnicity	10	11	.1618	. 1614	.00034	1	712	0.28
Intercept Differences for Ethnicity	11	12	.1614	. 1595	.00194	1	713	1.65
Algebra 1984 - 1985	Sophone	ore (Ethnicity	/ = White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1432	. 1432	.00000	1	871	0.00
Sex & Ethnicity Interaction Test	2	3	. 1432	, 1373	.00589	1	872	5.99
Slope Differences for Sex	7	8	. 1349	. 1325	.00243	1	875	2.45
Intercept Differences for Sex	8	9	. 1325	.1102	.02227	1	876	22.49 *
Slope Differences for Ethnicity	10	11	.1124	.1112	.00119	1	875	1.17
Intercept Differences for Ethicity	11	12	.1112	.1102	.00102	1	876	1.01
Algebra 1985 - 1986	Sophore	one (Ethnicity	/ = White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1497	.1497	.00002	1	617	0.02
Sex & Ethnicity Interaction Test	2	3	.1407	. 1384	.00229	1	618	1.65
Slope Differences for Sex	7	3	. 1332	. 1324	.00088	1	621	0.63
Intercept Differences for Sex	8	9	.1324	.1171	.01531	1	622	10.98 *
Slope Differences for Ethnicity	IC	11	.1203	.1182	.00207	1	621	1.46
Intercept Differences for Ethnicity	11	12	. 1182	. 1171	.00115	1	622	0.81

	Com	parison	!	R <sup>2</sup>		•		
F-Test Comporison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	af2	F
Algebra 1984 - 19	985 Junior	(Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1900	.1896	.00039	1	489	0.24
Sex & Ethnicity Interaction Test	2	3	.1896	.1879	.00169	1	490	1.02
Stope Differences for Sex	7	8	.1749	.1745	.00041	1	493	0.25
Intercept Differences for Sex	8	9	.1745	.1475	.02/02	1	494	16.17 **
Slope Differences for Ethnicity Intercept Differences for Ethnicity	10 11	11 12	.1602 .1544	. 1544 . 1475	.00574	1 1	493 494	3.37 4.08
intercept Differences for Ethnicity	• • • • • • • • • • • • • • • • • • • •	12	. 1244	. 1473	.00070	•	474	4.00
Algebra 1985 - 1986 Jur		-		4774	00//7		21.2	• /=
Slope Differences for Sex	7	8	.1377	.1331	.00463	1	273	1.47
Intercept Differences for Sex	8	9	. 1331	.1262	.00691	1	274	2.18
Algebra 1985 - 1980 Ju								
Slope Differences for Ethicity	10	11	.1407	. 1285	.01227	1	273	3.90
Intercept Differences for Ethnicity	11	12	.1285	.1262	.00228	1	274	0.72
Algebra 1984 - 1985 Ser	nior (Eth	nnicity not te	sted)					
Slope Differences for Sex	7	8	.1596	. 1492	.01037	1	265	3.27
Intercept Differences for Sex	8	9	.1492	.1147	.03457	1	266	10.81 *
Algebra 1984 - 1985 S	enior (Eth	nnicity = Whit	e & Nonwh	nite) (Sex not	tested)			
Slope Differences for Ethnicity	10	1;	.1472	.1273	_01997	1	265	5.20
Intercept Differences for Ethnicity	11	12	.1273	.1147	.01258	1	266	3.83
Geometry 1985 - 1986 Fr	eshmen (8	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.2441	. 2439	.00018	1	511	0.12
Intercept Differences for Sex	8	9	.2439	. 2392	.00469	1	512	3.18
Geometry 1985 - 1986 Freshi	men (Ethn	icity = White,	Black &	Hispanic) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2441	.2396	.00455	2	509	1.53
Intercept Differences for Ethnicity	11	12	.2596	.2393	.00034	Ź	511	0.12
Geometry 1984 - 1985 Sop	homore (1	Ethnicity not	test <b>e</b> d)					
Stope Differences for Sex	7	8	. 2400	.2400	.00001	1	561	0.03
Intercept Differences for Sex	8	9	.2400	.2322	.00779	1	562	5.76
Geometry 1984 - 1985 Sopho	more (Ethi	nicity = White	e, Black &	3 Hispanic) (S	Sex not tes	ted)		
Slope Differences for Ethnicity	10	11	.2444	. 2356	.00882	2	559	3.26
Intercept Differences for Ethnicity	11	12	. 2354	.2322	.00334	2	561	1.22
Geometry 1985 - 1986 Sop	homore (	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.2768	.2765	.00028	1	410	0.16
Intercept Differences for Sex	8	9	. 2765	. 2558	.02063	1	411	11.72 **
Geometry 1985 - 1986	Sophomore	(Eth. city =	White & I	Black) (Sex no	ot tested)			
Slope Differences for Ethnicity	10	11	. 2923	. 2672	.02506	1	371	13.14 **
Geometry 1984 - 1985 J	unior (E	thnicity not 1	tested)					
Siope Differences for Sex	7	8	. 2342	.2330	.00112	1	305	0.45
Intercept Differences for Sex	8	9	. 2330	.2141	.01896	1	306	7.56 *

	Co	mparison						
Test Companison	Full	Restricted	Fuil	Restricted	R <sup>2</sup> Change	df1	df2	F
Geometry 1984 - 1985 Ju	unior (E	thnicity = Whil	te & Nonwi	hite) (Sex no	tested)			
ope Differences for Ethnicity	10	11	.2195	.2142	.00034	1	305	0.13
te cept Differences for Ethnicity	11	12	.2192	.2141	.00513	1	306	2.01
Geometry 1985 - 1986 Jun	nior (E	thnicity not te	ested)					
e Differences for Sex عرد	7	8	.2097	.2097	.00005	1	123	0.01
tercept Differences for Sex	8	9	.2097	. 1949	.01481	1	124	2.32
Geometry 1985 - 1986 Ju	unior (E	thnicity = Whit	te & Nonw	hite) (Sex no	t tested)			
ope Differences for Ethnicity	10	11	.3029	. 2441	. 05873	1	123	10.36 '
Geometry 1984 - 1985 Sei	nior (E	thnicity not to	ested)					
me Differences for Sex	7	8	. 2339	. 2294	.00453	1	107	0.63
tercept Differences for Sex	8	9	. 2294	.2276	.00174	1	108	0.24
Geometry 1984 - i985 S	enior <b>(E</b>	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
oper Differences for Ethnicity	10	11	. 2451	. 2403	.00471	1	107	0.67
tercept Differences for Ethnicity	11	12	.2403	.2276	.01271	1	108	1.81
Calculus 1985 - 1986 Ju	nior (6	thnicity not t	ested)					
ope Differences for Scr	7	8	.1084	. 1071	.00:25	1	147	0.21
tercept Differences for Sex	8	9	. 1071	. 1070	.00015	1	148	0.02
General Science 1984 -	1985 Fre	shmen (Ethnic	ity = Whi	te, Black & H	ispanic)			
any Interaction Test (ASVAB*sex*ethnicity)	1	2	.2690	. 2655	.00347	2	1,956	4.64 *
& Ethnicity Interaction Test	2	3	. 2655	. 2578	.00777	2	1,958	10.36 *
nsistent Over or Under prediction of Subgroup	2	4	. 2655	. 2654	.00017	3	1,958	0.15
General Science 1985 - 1986	Freshm	en (Ethnicity	not teste	d)				
ope Differences for Sex	7	8	. 1105	.1078	.00267	1	274	0.82
tercept Differences for Sex	8	9	.1078	.1014	.00640	1	275	1.97
General Science 1985 - 19	86 Frest	nmen (Ethnicity	= White	& Black) (Sex		u)		
ape Differences for Ethnicity	10	11	. 1345	.1026	.03189	1	240	8.84 *
General Science 1984 -	1985 Soj	phomore (Ethni	city = Wh	ite & Nonwhit	e)			
day Interaction lest (ASVAB*sex*ethnicity)	1	2	.2447	.2426	.00212	1	341	0.96
* & Ethnicity Interaction Test	2	3	. 2426	.2303	.01229	1	342	5.55
upe Differences for Sex	7	8	.2146	. 2135	.00105	1	345	0.46
tersept Differences for Sex	8	9	. 2135	. 1803	.03328	1	346	14.64 *
oper Differences for Ethnicity	10	11	. 2025	. 1981	.00445	1	345	1.93
tercept Differences for Ethnicity	11	12	. 1981	. 1803	.01782	1	346	7.69 *
General \$2100ce 1985 - 1986	•	· ·						
aper Differences for Sex	7	8	. 1450	.1445	.00047	1	183	0.10
tercept Differences for Sex	8	9	. 1445	.1190	.02553	1	184	5.49
Grincint Scrence 1985 - 198	ις δυμένο		= White			d)		
ape Differences for Ethnicity	10	11	. 1784	.1724	.00505	1	158	1.17
rercept Differences for Ethnicity	11	12	.1724	.1426	.02974	1	159	5.71

	Co	mparison R <sup>2</sup>		<sub>8</sub> 2			•	
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Science 1984 - 1985	Junior	(Ethnicity no	t tested)					<del></del> -
Slope Differences for Sex	7	8	.0917	.0899	.00172	1	174	0.33
Intercept Differences for Sex	8	9	. 0899	.0735	.01647	1	175	3.17
General Science 1984 - 19	85 Juni	or (Ethnicity:	= White &	Black) (Sex	not tested	)		
Slope Differences for Ethnicity	10	11	.1500	. 1479	.00217	1	149	0.38
Intercept Differences for Ethnicity	11	12	. 1479	.0926	.05525	1	150	9.73 *
General Science 1985 - 1986	Junior	(Ethnicity no	t test <b>ed</b> )					
Slope Differences for Sex	7	8	. 2438	. 2435	.00033	1	258	0.11
Intercept Differences for Sex	8	9	. 2435	.2299	.01352	1	259	4.63
General Spience 1985 - 1986	Junior	(Ethnicity = 1	⊌hite & N	onwhite) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	.2328	.2300	.00279	1	258	0.94
Intercept Differences for Ethnicity	11	12	.2300	. 2299	.00002	1	259	0.01
General Science 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1006	.0999	.00066	1	182	0.13
Intercept Differences for Sex	8	9	.0999	.0816	.01833	1	183	3.73
Siology I - II 1984 - 1985 F	(eshiner	n (Ethnicity n	ot tested	Ь				
Slope Differences for Sex	7	8	. 2265	.2262	.00028	1	299	0.11
Intercept Differences for Sex	8	9	.2262	.2142	.01205	1	300	4.67
Biology I - II 1984 - 1985	Freshme	en (Ethnicity =	White &	Nonwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2180	.2142	.00381	1	299	1.46
Intercept Differences for Ethnicity	11	12	.2142	.2142	.00001	1	300	0.00
Biology I - 11 1985 - 1	986 Fr	eshmen (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2024	.2023	.00008	1	1,119	0.11
Sex & Ethnicity Interaction Test	2	3	.2023	.2022	.00008	1	1,120	0.11
Slope Differences for Sex	7	8	. 1998	.1992	.00053	1	1,123	0.75
Intercept Differences for Sex	8	9	.1992	.1717	.02752	1	1,124	38.63 *
Slope Differences for Ethnicity	10	11	.1744	.1741	.00033	1	1,123	0.45
Intercept Differences for Ethnicity	11	12	.1741	.1717	.00235	1	1,124	3.19
Biology I - 11 1984 - 19	985 Sopi	homore (Ethnic	ity = Whi	ite, Black & F	lispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2685	.2681	.00037	2	1,371	0.35
Sex & Ethnicity Interaction Test	2	3	.2681	.2597	.00840	2	1,373	7.88
Consistent Over or Under prediction of Subgroup	2	4	.2661	. 2555	.01265	3	1,373	7.91 -
Slope Differences for Sex	2	5	.2681	.2574	.01068	1	1,373	20.04 *
Slope Differences for Ethnicity	2	6	. 2681	. 2661	.00200	2	1,373	1.88
Biology I - II 1985 - 1986 5	Sophomo	re (Ethnicity	nol teste	ed)				
Slope Differences for Sex	7	8	. 2588	.2501	.00873	1	335	3.95
Intercept Differences for Sex	8	9	.2501	.2016	.04846	1	336	21.71

	Co	mparison	R	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Biology I - II 1985 - 1986 So	phomore (	Ethnicity = Wh	ite, Black	& Hispanic)	(Sex not	tested)		
Slope Differences for Ethnicity	10	11	.2080	.2053	.00269	2	333	0.57
Intercept Differences for Ethnicity	11	12	.2053	.2016	.00371	2	335	0.78
Biology I - II 1984	- 1985 Ju	mior (Ethnici	ty = White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2598	. 2592	.00062	1	397	0.33
Sex & Ethnicity Interaction Test	2	3	. 2592	.2588	.00035	1	398	0.19
Slope Differences for Sex	7	8	.2457	.2405	.00518	1	401	2.75
Intercept Differences for Sex	8	Ŷ	.2405	.2106	.02993	1	402	15.84 **
Slope Differences for Ethnicity	10	11	.2287	.2257	.00295	1	401	1.53
Intercept Differences for Ethnicity	11	12	.2257	.2106	.01510	1	402	7.84 *
810logy I - II 1985 - 198	ó Junier	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.3812	.3600	.02126	1	147	5.05
Intercept Differences for Sex	8	9	.3600	.3283	.03171	1	148	7.33 *
Biclogy I - II 1984 - 198	5 Service	(Ethnicity no	l tested)					
Slope Differences for Sex	7	8	.3575	.3548	.00269	1	195	0.82
Intercept Differences for Sex	8	9	.3548	.3271	.02772	,	196	8.42 *
intercept billiernes for sex	8	,	.3740	.5271	.02112	•	170	0.42
Biology I - !! 1984 - 1		•					174	0.74
Slope Differences for Ethnicity	10	11	.3760	.3748	.00127	1	176	0.36
Intercept Differences for Ethnicity	11	12	.3748	.3396	. 03518	1	177	9.96 *
Chemistry I - II 1985 - 198		•						
Slope Differences for Sex	7	8	.2157	.2106	.00510	1	128	0.83
Intercept Differences for Sex	8	9	.2106	.1887	.02192	1	129	3.58
Chemistry I - 11 1984 - 1985	Sophomo	e (Ethnicity	not tested	t)				
Slope Differences for Sex	7	8	. 0961	.0830	.01309	1	168	2.43
Intercept Differences for Sex	8	9	.0830	.0590	.02402	1	169	4.43
Chemistry I - II 1985 - 1986	Sophomo	re (Ethnicity	not tested	<del>d</del> )				
Slope Differences for Sex	7	8	.1429	. 1379	.00503	1	430	2.52
Intercept Differences for Sex	8	9	. 1379	.0954	.04250	1	431	21.25 **
Chemistry 1 - 11 1984 - 19	85 Junio	r (Etnnicity n	ot tesied	)				
Slope Differences for Sex	7	8	.2226	.2191	.00344	1	426	1.89
Intercept Differences for Sex	8	9	. 2191	. 1741	.04502	1	427	24.62 **
Chemistry 1 - 11 1984 - 1	005 1	os /Etheisia	libie - C	conchiers (C-	w not tr-	٠٨٩١		
Slope Differences for Ethnicity	985 Juni 10	or (Ethnicity = 11	, 2115	100 (se 1031,	x not test .00846	(ea)	426	4.5?
Intercept Differences for Ethnicity	11	12	.2031	. 1741	.02897	1	427	15.52 **
6kminani 1 1005 10	NR.4 1: -:	. (Pabulita						
Chemistry 1 - 11 1985 - 19	86 Junio 7	•			007//	1	177	1 3/
Slope Differences for Sex		8	. 1766	. 1692	.00744	1	137	1.24
Intercept Differences for Sex	ర	9	. 1692	.1110	.05820	1	138	9.67 *

Table D-8. (Continued)

	Соп	parison		<sub>R</sub> 2				-
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfj	df2	F
Chemistry I - II 1985 -	1986 Junior	(Ethnicity =	White &	Nonwhite) (Se	not teste			
Slope Differences for Ethnicity	10	11	.1288	.1281	.00071	1	137	0.11
Intercept Differences for Ethnicity	11	12	.1281	.1110	.01710	1	138	2.71
Chemistry 1 - [1 1984 - 1	985 Senior	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.2319	.2300	.00190	1	156	0.39
Intercept Differences for Sex	8	9	.2300	.2298	.00021	1	157	0.04
Chemistry I - II 1984 -	1985 Senior	(Ethnicity =	White &	Nonwhite) (Se	k not teste	ea)		
Slope Differences for Ethnicity	10	11	.2749	.2363	. 03869	1	156	8.33
Physics 1 - 11 1985 - 19	86 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1447	.1341	.01062	1	232	2.88
Intercept Differences for Sex	8	9	.1341	.0964	.03770	1	233	10.14
Physics I - 11 1984 - 19	85 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2036	.2032	.00045	1	166	0.09
Intercept Differences for Sex	8	9	.2032	.1695	.03361	1	167	7.94 1
Government & Civics 1984 -	1985 Freshi	men (Ethnicit	y not tes					
Slope Differences for Sex	7	ន	.3024	.2777	.00251	1	344	1.24
Intercept Differences for Sex	8	9	.2999	.2942	.00574	1	345	2.83
Government & Civics 1984 - 1	985 Sophom		•					
Slope Differences for Sex	7	8	.1734	.1571	.01629	1	155	3.05
Intercept Differences for Sex	8	9	.1571	.1267	.03040	1	156	5.63
Government & Civics 1985 - 1	•		•					
Slope Differences for Sex	7	8	.1820	. 1727	.00933	1	417	4.76
Intercept Differences for Sex	8	9	.1727	.1446	.02804	1	418	14.17
Government & Civics 1985 -	•		-	•				
Slope Differences for Ethnicity	10	11	.1722	.1722	.00004	1	388	0.02
Intercept Differences for Ethnicity	11	12	.1722	. 1569	.01524	1	389	7.16
Government & Civics 1984 -	1985 Junio			•				
Slope Differences for Sex	7	8	.2716	. 2683	.00324	1	456	2.03
Intercept Differences for Sex	8	9	.2683	. 2524	.01594	1	457	9.96
Government & Civics 1984	1985 Juni	or (Ethnicity	= White &	Nonwhite) (S		ted)		
Slope Differences for Ethnicity	10	11	.2559	. 2551	.00074	1	456	0.45
Intercept Differences for Ethnicity	11	12	.2551	. 2524	.00275	1	457	1.69
Government & Civics			•					
3-way interaction Test (ASVAB*sex*ethnicity)	1	2	.2904	. 2897	.00067	1	707	0.67
Sex & Ethnicity Interaction Test	2	3	.2897	. 2894	.00030	1	708	0.30
Slope Differences for Sex	7	8	.2817	.27?7	.05404	1	711	4.00
Intercept Differences for Sex	১	9	.2777	. 2518	.02586	1	712	25.49
Slope Differences for Ethnicity	10	11	. ∠598	. 2598	.00000	1	711	0.00
Intercept Differences for Ethnicity	11	12	.2598	. 2518	.00791	1	712	7.61

fable D-8. (Continued)

	Con	parison		2				
F-Test Comparison	Full	Restricted	full	Restricted	R <sup>2</sup> Change	df1	df2	F
Government & Civics 1984	4 - 1985	Senio: (Ethri	icity = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2759	.2756	.00023	1	602	0.19
Sex & Ethnicity Interaction Test	2	3	. 2756	.2756	.00004	1	603	0.03
Slope Differences for Sex	7	8	. 2651	. 2645	.00061	1	606	0.51
Intercept Differences for Sex	8	9	-2645	.2551	.00938	1	607	7.74 *
Slope Differences for Ethnicity	10	11	.2672	.2664	.00081	1	606	0.67
Intercept Differences for Ethnicity	11	12	.2664	.2551	.01129	1	607	9.34 *
History 1984 - 1985	Freshmer	n (Ethnicity	= White,	Black & Hispa	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2959	.2946	.00130	2	1,319	1.21
Sex & Ethnicity Interaction Test	2	3	.2946	.2928	.00177	2	1,321	1.65
Slope Differences for Sex	7	8	. 2877	.2875	.00021	1	1,327	0.38
Intercept Differences for Sex	8	9	.2875	.2579	.02956	1	1,328	55.09 **
Slope Differences for Ethnicity	10	11	. 2672	.2613	.00590	2	1,325	5.33 *
Intercept Differences for Ethnicity	11	12	.2613	.2579	.00341	2	1,327	3.06
History 1985 - 1986	Freshme	n (Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2825	.2825	.00002	1	1,343	0.04
Sex & Ethnicity Interaction Test	2	3	.2825	.2822	.00027	1	1,344	0.51
Slope Differences for Sex	7	8	.2810	.2809	.00004	1	1,347	0.07
Intercept Differences for Sex	8	9	.2809	.2738	.00711	1	1,348	13.34 *
Slope Differences for Ethnicity	10	11	.2750	.2739	.00114	1	1,347	2.12
Intercept Differences for Ethnicity	11	12	.2739	.2738	.00007	1	1,348	0.13
History 1984 - 1985	Sophomo	re (Ethnicity	= White	& Elack)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2883	. 2873	.00105	1	1,430	2.11
Sex & Ethnicity Interaction Test	2	3	.2873	. 2849	.00242	1	1,431	4.87
Slope Differences for Sex	7	8	.2841	. 2840	.00008	1	1,434	0.16
Intercept Differences for Sex	8	9	.2840	.2676	- 01635	1	1,435	32.77 *
Slope Differences for Ethnicity	10	11	.2685	. 2685	.00002	1	1,434	0.04
Intercept Differences for Ethnicity	11	12	.2685	.2676	.00083	1	1,435	1.64
History 1985 - 1986	Sophomo	re (Ethnicity	= White,	Black & Hisp	panic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2301	.2294	.00078	2	1,465	0.74
Sex & Ethnicity Interaction Test	2	3	.2294	. 2235	.00586	2	1,467	5.58 *
Slope Differences for Sex	7	8	.2119	.2103	.00166	1	1,473	3.11
Intercept Differences for Sex	8	9	.2103	. 1751	.03521	1	1,474	65.72 *
Slope Differences for Ethnicity	10	11	.1900	. 1812	.00875	2	1,471	7.94 *
History 1984 - 19	85 Junio	r (Ethnicity	= Whit &,	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.3113	.3106	.00068	1	1,102	1.09
'ex & Ethnicity Interaction Test	2	3	.3106	.3098	.00081	1	1,103	1.29
Slope Differences for Sex	7	8	.3080	.3077	.00028	1	1,106	0.44
Intercept Differences for Sex	8	9	.3077	.2793	.02842	1	1,107	45.45 *
Slope Differences for Ethnicity	10	11	.2810	.2806	.00041	1	1,106	0.64
Intercept Differences for Ethnicity	11	12	. 2806	.2793	.00125	1	1,107	1.93

<u>Table D-8</u>. (Continued)

		Co	mparison		2				
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
	History 1985 - 1986 Jun	ior (Et	hnicity not tes	ted)					
Slope Differences for S	Sex	7	8	. 2495	. 2364	.01311	1	428	7.47 *
	History 1985 - 1986	Junior (	Ethnicity = Whi	ite & Bla	ck) (Sex not	tested)			
Slope Differences for i	Ethnicity	10	11	.2012	.2010	.00019	1	409	0.10
Intercept Differences	for Ethnicity	11	12	.2010	.1985	.00251	1	410	1.29
	History 1984 - 1985 Sen	ior (Et	hnicity not tes	sted)					
Slope Differences for S	Sex	7	8	.3518	.3481	. 00372	1	423	2.43
Intercept Differences	for Sex	8	9	.3481	.3427	.00543	1	424	3.53
	History 1984 - 1985	Senior (	Ethnicity = Wh	ite & Bla	ck) (Sex not	tested)			
Slope Differences for E	Ethnicity	10	11	.3853	. 3829	.00248	1	402	1.63
Intercept Differences	for Ethnicity	11	12	.3829	.3604	.02251	1	403	14.70 **
rú i	eign Language 1984 - 1985	freshme	n (Ethnicity 1	not teste	d)				
Slope Differences for :	Sex	7	8	.2758	.2757	.00012	1	1,012	0.17
Intercept Differences	for Sex	8	9	.2757	.2238	.05192	1	1,013	72.61
Foreign	n Language 1984 - 1985 Fr	eshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for I	- ·	10	11	.2533	. 2490	.00431	S	1,010	2,91
Intercept Differences	for Ethnicity	11	12	.2490	.2238	.02525	2	1,012	17.01 *
For	eign Language 1985 - 1986	Freshme	n (Ethnicity)	not teste	d)				
Slope Differences for	Sex	7	8	.2079	.2052	.00272	1	<b>79</b> 7	2.74
Intercept Differences	for Sex	8	ý	.2052	.1600	.04519	1	798	45.37 *
Foreig	n Language 1985 - 1986 Fr	eshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for	Ethnicity	10	11	.1784	.1709	.00744	2	795	3.60
Intercept Differences	for Ethnicity	11	12	.1709	. 1600	.01090	2	797	5.24 *
Fore	ign Language 1984 - 1985	Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for		. 7	8	.2282	.2277	.00043	1	892	0.50
Intercept Differences		8	9	.2278	. 1463	.08140	1	893	94.13 *
Foreia	n Language 1984 - 1985 So	phomore	(Ethnicity = W	hite, Bla	ck & Hispanic	:) (Sex not	testo	d)	
Slope Differences for		10	11	. 1649	. 1617	.00328	2	890	1.75
Intercept Differences	for Ethnicity	11	12	.1617	. 1463	.01532	2	892	8.15 *
	Foreign Language 1985 -	1986 Sc	ophomore (Ethn	icity = W	lhite & Nonwhi	te)			
3-way Interaction Test	(ASVAB*sex*ethnicity)	1	2	.1828	. 1805	.00229	1	604	1.70
Sex & Ethnicity Intera	ction Test	2	3	.1805	. 1802	.00028	1	605	0.21
Slope Differences for	Sex	7	ઠ	.1626	. 1610	.00153	1	608	1.11
Intercept Differences	for Sex	8	9	.1610	.1018	.05922	1	609	42.99 *
Slope Differences for	Ethnicity	10	11	.1221	. 1205	.00165	1	608	1.14
Intercept Differences	for Ethnicity	11	12	.1205	. 1018	.01863	1	609	12.90 *

Table D-8. (Continued)

		Com	parison	R	2				
F·Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Fo	reign Language 1984 - 19	85 Junier	(Ethnicity no	t tested)	)				
Slope Differences for	Sex	7	8	.2263	.2226	.00377	1	480	2.34
Intercept Differences	for Sex	8	9	.2226	.1466	.07593	1	481	46.98 **
forei	gn Language 1984 - 1985	Junior (Et	hnicity = ₩hit	e, Black	& Hispanic)	(Sex not te	sted)		
Slope Differences for	Ethnicity	10	11	.1723	.1707	.00165	2	478	0.48
Intercept Differences	for Ethnicity	11	12	.1707	. 1466	.02406	2	480	6.96 *
Fo	reign Language 1985 - 19	86 Junior	(Ethnicity no	t tested)	)				
Slope Differences for	Sex	7	8	.2040	. 1888	.01523	1	247	4.73
Intercept Differences	for Sex	8	9	.1888	. 1429	.04591	1	248	14.03 **
F	oreign Language 1985 - 1	986 Junior	(Ethnicity =	White & F	Hispanic) (Se	x not teste	ed)		
Slope Differences for	Ethnicity	10	11	.1218	. 1042	.01755	1	205	4.10
Intercept Differences	for Ethnicity	11	12	.1042	.0995	.00471	1	206	1.08
Fc	reign Language 1984 - 19	85 Senior	(Ethnicity no	t tested:	<b>)</b>				
Slope Differences for	Sex	7	8	. 1809	. 1778	.00319	1	224	0.87
Intercept Differences	for Sex	8	ý	.1778	. 1615	.01628	1	225	4.45
F	oreign Language 1984 - 1	985 Senior	(Ethnicity =	White & I	Hispanic) (Se	x not test	ed)		
Slope Differences for	Ethnicity	10	11	.1158	.1120	.00375	1	185	0.78
Intercept Differences	for Ethnicity	11	12	.1120	. 1036	.00839	1	186	1.76
Secreta	ry & Office Education 19	85 - 1986	Junior (Ethnic	ity = Wh	ite & Nonwhit	e) (Sex no	t teste	ed)	
Slope Differences for	Ethnicity	10	11	.1317	.1306	.00110	1	215	V.27
Intercept Differences	for Ethnicity	11	12	. 1306	. 1306	.00002	1	216	0.00
Secreta	ry & Office Education 19	84 - 1985	Senior (Ethnic	ity = Wh	ite & Nonwhit	e) (Sex no	t teste	ed)	
Slope Differences for	Ethnicity	10	11	.1168	.1112	.00556	1	220	1.38
Intercept Differences	for Ethnicity	11	12	.1112	.1060	.00519	1	221	1.29
Typing	& Word Processing 1984 -	1985 Fres	shmen (Ethnic	ity not to	ested)				
Slope Differences for	Sex	7	8	.2441	.2441	.00005	1	507	0.03
Intercept Differences	for Sex	8	9	.2441	. 2345	.00959	1	508	6.45
Typir	ng & Word Processing 1984	-1985 Fres	shmen (Ethnici:	ty = White	e, Black & Hi	spanic) (S	ex not	tested)	
Stope Differences for	-	10	11	. 2381	. 2361	.00208	2	505	0.69
Intercept Differences	for Ethnicity	11	12	.2360	.2345	.00159	2	507	0.53
Typing	& Word Processing 1985	- 1986 Fre	shmen (Ethnic	ity not t	ested)				
Slope Differences for	=	7	8	. 1894	. 1885	.00096	1	492	0.58
Intercept Differences		8	9	. 1885	.1566	.03188	1	493	19.37 **
Typir	ng & Word Processing 1985	5-1986 Fre	shmen (Ethnici	ty = Whit	e & Hispanic)	(Sex not	tested	)	
Typir Slope Differences for	-	5-1986 fre: 10	shmen (Ethnici 11	ty = White .1522	e & Hispanic) .1510	(Sex not .00120	tested 1	) 445	0.63

<u>Table D-8</u>. (Continued)

	Cor	nparison	-	R <sup>2</sup>		-		
f-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	f
Typing & Word Processing 1984 - 1	985 Sopho	omore (Ethnici	ty not t	ested)				
Slope Differences for Sex	7	8	.2160	.2150	.00107	1	631	0.86
Intercept Differences for Sex	8	9	.2150	.1760	. 03900	1	632	31.40 **
Typing & Word Processing 1984-1	985 Sophi	omore (Ethnicit	y = Whit	e, Black & Hi	spanic) (Se	x not	tested)	
Slope Differences for Ethnicity	10	11	.1794	.1786	.00081	2	629	0.31
Intercept Differences for Ethnicity	11	12	.1786	.1760	.00258	2	631	0.99
Typing & Word Processing 1985 - 1	986 Sophi	omore (Ethnici	ty not t	ested)				
Slope Differences for Sex	7	ઠ	.1894	.1812	.00818	1	405	4.09
Intercept Differences for Sex	8	9	.1812	. 1698	.01138	1	406	5.64
Typing & Word Frocessing 1985-1	986 Soph	omore (Ethnicit	y = Whit	e & Black) (S	ex not test	ted)		
Slope Differences for Ethnicity	10	11	.1660	.1649	.00111	1	374	0.50
Intercept Differences for Ethnicity	11	12	.1649	. 1637	.00119	1	375	0.53
Typing & Word Processing 1984 -	1985 Ju	nior (Ethnicit	y not te	sted)				
Slope Differences for Sex	7	8	.2250	.2242	.00080	1	391	0.40
Intercept Differences for Sex	8	9	.2242	.1612	.06300	1	392	31.83 **
Typing & Word Processing 1984	- 1985	Junior (Ethnici	ty = Whi	te & Slack) (	Sex not te	sted)		
Stope Differences for Ethnicity	10	11	. 1698	. 1695	.00028	1	359	0.12
Intercept Differences for Ethnicity	11	12	.1695	. 1634	.00614	1	<b>36</b> 0	2.66
Typing & Word Processing 1985	1986 Ju	nior (Ethnicit	y not te	sted)				
Slope Differences for Sex	7	8	.1521	.1502	.00186	1	221	0.49
Intercept Differences for Sex	8	9	.1502	.1106	.03962	1	222	10.35 *
Typing & Word Processing 1989	5-1986 Ju	nior (Ethnicit)	/= White	& Nonwhite)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	.1312	. 1236	.00763	1	221	1.94
Intercept Differences for Ethnicity	11	12	.1236	.1106	.01299	1	255	3.29
Typing & Word Processing 1984	- 1985 Se	nior (Ethnicit	y not te	ested)				
Slope Differences for Sex	7	8	.2231	. 2195	.00361	1	216	1.00
Intercept Differences for Sex	8	9	.2195	.1901	.02933	1	217	8.16 *
Accounting/Bookkeeping 1985 -	1986 Soph	omore (Ethnici	ity not t	est <b>ed)</b>				
Slope Differences for Sex	7	8	.2241	. 2223	.00177	1	311	0.71
Intercept Differences for Sex	8	9	.2223	. 1731	.04928	1	312	19.77 **
Accounting/Bookkeeping 1984 -	1985 Jun	ior (Ethnicity	y not tes	sted)				
Slope Differences for Sex	7	8	.3027	. 2982	.00443	1	239	1.52
Intercept Differences for Sex	8	9	. 2982	.2116	.08661	1	240	29.62 **
Accounting/Bookkeeping 1985 -	1986 Jur	ior (Ethnicity	y not tes	sted)				
Slope Differences for Sex	7	8	. 1369	. 1311	.00579	1	185	1.24
Intercept Differences for Sex	8	9	.1311	. 0967	.03442	1	186	7.37 *

<u>Table D-8</u>. (Continued)

	Cor	nparison		R <sup>2</sup>				
F-Test Companison	Full	Restricted	fuil	Restricted	R <sup>2</sup> Change	df1	df2	F
Accounting/Bookkeeping 198	34 - 1985 Sen	ior (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	. 1951	.1907	.00436	1	247	1.34
Intercept Differences for Sex	8	9	.1907	.1570	.03370	1	248	10.33 *
Home Economics 1984 -	1985 Freshmen	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	. 2346	.2338	. 00083	1	547	0.60
Intercept Differences for Sex	8	9	.2338	.1916	.04222	1	548	30.19 **
Home Economics 1984-	1985 Freshmen	(Ethnicity = 1	White & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.2506	.2487	.00191	1	519	1.32
Intercept Differences for Ethnicity	11	12	.2487	.1794	.06932	1	520	47.98**
Home Economics 1985 -	1986 Freshmen	(Ethnicity n	ot tested	)				
Stope Differences for Sex	7	8	. 1833	.1825	.00079	1	312	0.30
Intercept Differences for Sex	8	9	. 1825	.1241	.05845	1	313	22.38 *1
Home Economics 1985-	1986 Freshmen	(Ethnicity =	White & N	onwhite) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	.1279	.1277	.00025	1	312	0.09
Intercept Differences for Ethnicity	11	12	.1277	.1241	.00359	1	313	1.29
Nome Economics 1984 -	1985 Sophomor	e (Ethnicity	not teste	d)				
Stope Differences for Sex	7	8	. 1977	.1977	.00002	1	321	0.01
Intercept Differences for Sex	8	9	. 1977	.1416	.05608	1	322	22.51 **
Home Economics 1984-1	985 Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not teste	<b>d)</b>		
Slope Differences for Ethnicity	10	11	.1836	.1727	.01090	1	321	4.29
Intercept Differences for Ethnicity	11	12	.1727	.1416	.03108	1	322	12.10**
Home Economics 1985 -	1986 Sophomor	e (Ethnicity	not teste	·d)				
Slope Differences for Sex	7	8	.1937	. 1936	.00016	1	394	0.08
Intercept Differences for Sex	8	Q	. 1936	.1354	.05822	1	395	28.52 *
Home Economics 1985-1	986 Sophomore	(Ethnicity =	White & N	lonahite) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	.1366	.1358	.00084	1	394	0.38
Intercept Differences for Ethnicity	11	12	.1358	.1354	.00042	1	395	0.10
Home Economics 1984 -	1985 Junier	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1723	.1723	.00000	1	279	0.00
Intercept Differences for Sex	8	9	.1723	.1454	. 02693	1	280	9.11 *
Home Economics 1984-	1985 Junior (	Ethnicity = Wh	nite & Nor	nwhite) (Sex n	ot tested)			
Stope Differences for Ethnicity	10	11	.1475	. 1475	.00001	1	279	0.00
Intercept Differences for Ethnicity	11	12	.1475	. 1454	.00215	1	280	0.71
Home Economics 1985 -	1985 Junior	(Ethnicity no	ot tested)	)				
Slope Differences for Sex	7	8	.2057	.2050	.00074	1	358	0.33
Intercept Differences for Sex	8	9	. 2050	. 0972	. 10775	1	359	48.66 *

Table 0-8. (Concluded)

	Cor	mparison		R <sup>2</sup>		-		
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1985-	1986 Junior (1	Ethnicity = Wh	ite & Jun	ior) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1002	.0988	.00144	1	358	0.57
Intercept Differences for Ethnicity	11	12	.0988	.0972	.00157	1	359	0.63
Home Economics 1984 -	1985 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1811	.1795	.00160	1	318	0.62
Intercept Differences for Sex	8	9	.1795	.1402	. 03929	1	319	15.28 **
Home Economics 1984	-1985 Senior	(Ethnicity = W	hite & No	nwhite) (Sex	not tested:	<b>)</b>		
Slope Differences for Ethnicity	10	11	.1504	.1432	.00714	1	318	2.67
Intercept Differences for Ethnicity	11	12	.1432	.1402	.00300	1	319	1.12
Computer Programming 1985	- 1986 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2730	.2727	.00027	1	227	0.08
Intercept Differences for Sex	8	9	.2727	. 2025	.07023	1	228	22.02 **
Computer Programming 198	34 - 1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2367	.2349	.00178	1	240	0.56
Intercept Differences for Sex	8	9	.2349	.2173	.01760	1	241	5.54
Computer Programming 198	35 - 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.3421	.3414	.00069	1	157	0.17
Intercept Differences for Sex	8	9	.3414	.2475	.09382	1	158	22.51 **
Computer Programming 198	84 - 1985 Seni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	. 1947	. 1939	.00082	1	152	0.16
Intercept Differences for Sex	8	9	.1939	. 1924	.00151	1	153	0.29

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

<u>Table 0-9</u>. F-Tests of Significance for Perceptual Speed Composite

	Co	mparison	ison R <sup>2</sup>					
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
English 1 - IV 1984 - 19	85 Fre	shmen (Ethnic	ity - Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1572	.1570	.00026	2	2,422	0.37
Sex & Ethnicity Interaction Test	2	3	. 1570	. 1485	.00847	2	2,424	12.18 **
Consistent Over or Under prediction of Subgroup	2	4	.1570	.1428	.01418	3	2,424	13.59 **
Slope Differences for Sex	2	5	.1570	.1570	.00000	1	2,424	0.01
English I - IV 1985 - 19	86 Fre	shmen (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1358	. 1358	.00003	2	1,989	0.03
Sex & Ethnicity Interaction Test	2	3	. 1358	.1293	.00645	2	1,991	7.43 *1
Consistent Over or Under prediction of Subgroup	2	4	. 1358	.1220	.01384	3	1,991	10.63 **
Slope Differences for Sex	2	5	. 1358	.1358	.00001	1	1,991	0.03
English I - IV 1984 - 198	5 Soph	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1725	.1712	.00136	2	2,296	1.89
Sex & Ethnicity Interaction Test	2	3	.1712	.1699	.00127	2	2,298	1.76
Slope Differences for Sex	7	8	. 1283	.1282	.00003	1	2,304	0.08
Intercept Differences for Sex	8	9	. 1282	.1131	.01513	1	2,305	40.01 *
Slope Differences for Ethnicity	10	11	. 1522	.1507	.00147	2	2,302	1.99
Intercept Differences for Ethnicity	11	12	. 1507	.1131	.03762	2	2,304	51.02 *
English 1 · 1V 1985 - 198	6 Soph	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1339	.1325	.00135	2	1,942	1.51
Sex & Ethnicity Interaction Test	2	3	. 1325	. 1320	.00058	2	1,944	0.65
Slope Differences for Sex	7	8	.0707	.0706	.00005	1	1,950	0.10
Intercept Differences for Sex	8	9	.0706	-0429	.02776	1	1,951	58.27 **
Slope Differences for Ethnicity	10	11	. 1020	.0962	.00575	2	1,948	6.24 *
Intercept Differences for Ethnicity	11	12	.0962	.0429	.05333	2	1,950	57.53 *1
English I - IV 1984 - 1	985 Ju	ınior (Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ACVAB*scx*ethnicity)	1	2	.1344	.1338	.00062	2	1,721	0.61
Sex & Ethnicity Interaction Test	2	3	.1338	. 1336	.00011	2	1,723	0.11
Slope Differences for Sex	7	ઠ	.0972	. 0972	.00004	1	1,729	0.08
Intercept Differences for Sex	8	9	.0972	.0569	.04025	1	1,730	77.13 *
Slope Differences for Ethnicity	10	11	.0883	.0836	.00473	2	1,727	4.48
Intercept Differences for Ethnicity	11	12	.0836	.0569	.02669	2	1,729	25.18 *
English 1 - IV 1985 - 1	1986 Ju	ınior (Ethnici	ty = Whit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1280	.1271	.00091	1	1,258	1.31
Sex & Ethnicity Interaction Test	2	3	.1271	. 1265	.00060	1	1,259	0.86
Slope Differences for Sex	7	8	.1045	.1036	.00092	1	1,262	1.30
Intercept Differences for Sex	8	9	. 1036	.0588	.64472	1	1,263	63.00 *
Slope Differences for Ethnicity	10	11	.0774	.0773	.00007	1	1,262	0.10
Intercept Differences for Ethnicity	11	12	.0773	.0588	.01848	1	1,263	25.30 *

Table D-9. (Continued)

	Comp	parison	F	2	-			
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df3	F
English I - IV 1984 -	- 1985 Sen	ior (Ethnici	ty = White	, Black & Hi	spanic)			
3-неу Interaction Test (ASVAB*sex*ethnicity)	1	2	.0942	.0919	.00226	2	1,275	1.59
Sex & Ethnicity Interaction Test	2	3	.0919	.0916	.00034	2	1,277	0.24
Slope Differences for Sex	7	8	.0578	. 0578	.00000	1	1,283	0.00
Intercept Differences for Sex	8	9	.0578	.0442	.01358	1	1,284	18.51 **
Slope Differences for Ethnicity	10	11	.0725	. 0693	.00319	2	1,281	2.20
Intercept Differences for Ethnicity	11	12	.0693	.0442	.02509	2	1,283	17.30 **
General Math 1984 -	1985 Freshi	men (Ethnici	ty = White	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0925	. 0911	.00143	2	1,167	0.92
Sex & Ethnicity Interaction Test	2	3	.0911	.0881	.00296	2	1,169	1.90
Slope Differences for Sex	7	8	.0736	.0728	.00080	1	1,175	1.01
Intercept Differences for Sex	8	9	.0728	.0724	.00033	1	1,176	0.42
Slope Differences for Ethnicity	10	11	.0873	.0850	.00223	2	1,173	1.43
Intercept Differences for Ethnicity	11	12	.0850	.6724	.01259	2	1,175	8.08 **
General Math 1985 -	1986 Fresh	men (Ethnici	ty = White	c & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0424	.0423	.00019	1	549	0.11
Sex & Ethnicity Interaction Test	2	3	.0423	.0372	.00501	1	550	2.88
Slope Differences for Sex	7	8	.0340	.0328	.00127	1	553	0.73
Intercept Differences for Sex	8	9	.0328	.0322	.00059	1	554	0.34
Stope Differences for Ethnicity	10	11	.0357	.0342	.00151	1	553	0.87
Intercept Differences for Ethnicity	11	12	.0342	.0322	.00199	1	554	1.14
General Math 1984 -	1985 Sopho	more (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1093	.1014	.00797	2	736	3.29
Sex & Ethnicity Interaction Test	2	3	.1014	.0979	.00346	2	738	1.42
Slope Differences for Sex	7	8	. 0946	.0944	.00013	1	744	0.10
Intercept Differences for Sex	8	9	.0944	.0934	.00100	1	745	0.82
Slope Differences for Ethnicity	10	11	.0968	.0963	.00045	2	742	0.19
Intercept Differences for Ethnicity	11	12	.0963	. 0934	.00288	5	744	1.18
General Math 1985 -	1986 Sopho	more (Ethnic	ity = Whi	te & Black)				
3-way Interaction lest (ASVAB*sex*ethnicity)	1	2	.1113	.1113	.00002	1	305	0.01
Sex & Ethnicity Interaction Test	2	3	. 1113	.1049	.00642	1	305	2.21
Slope Differences for Sex	7	3	.0610	.0598	.00113	1	309	0.37
Intercept Differences for Sex	8	9	.0598	.0403	.01955	1	310	6.45
Slope Differences for Ethnicity	10	11	.0857	.0826	.00313	1	309	1.06
Intercept Differences for Ethnicity	11	12	.0826	.0403	.04228	1	310	14.29 **
General Math 1984 -	1985 Juni	or (Ethnicit	y = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0712	.0681	-00307	1	266	0.88
Sex & Ethnicity Interaction Test	2	3	.0681	.0676	.00052	1	267	0.15
Slope Differences for Sex	7	8	.0447	.0445	.00018	1	270	0.05
Intercept Differences for Sex	8	9	.0445	.0284	.01611	1	271	4.57
Slope Differences for Ethnicity	10	11	.0495	.0481	.00140	1	270	0.40
Intercept Differences for Ethnicity	11	12	.0481	.0284	.01971	1	271	5.61

Table D-9. (Continued)

	Co	omparison		<sub>8</sub> 2	· · · · · · · · · · · · · · · · · · ·			
F-Yest Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
General Math 1985 - 1986	Junior	(Ethnicity not	tested)		<del></del>			
Slope Differences for Sex	7	8	.0549	.0541	.00084	1	222	0.20
Intercept Differences for Sex	8	9	.0541	. 0423	.01173	1	223	2.77
General Math 1985 - 1986	Junior	(Ethnicity = W	nite & Bl	ach (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1218	.1112	.01058	1	195	2.35
Intercept Differences for Ethnicity	11	12	.1112	.0686	.04257	1	196	9.39 *
General Math 1984 - 1985	Senior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.0302	.0297	.00055	1	230	0.13
Intercept Differences for Sex	8	9	.0297	.0289	.00076	1	231	0.18
General Math 1984 - 198	5 Senio	r (Ethnicity = 1	⊌hite & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	. 1048	.0936	.01117	1	203	2.53
Intercept Differences for Ethnicity	11	12	. 0936	.0273	. 06633	1	204	14.93 **
Algebra 1984 - 1985	Freshm	en (Ethnicity:	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0899	.0899	.00004	1	1,180	0.05
Sex & Ethnicity Interaction Test	2	3	.0899	.0896	.00029	1	1,181	0.38
Siope Differences for Sex	7	8	.0810	.0780	.00304	1	1,184	3.91
Intercept Differences for Sex	8	9	.0780	.0665	.01150	1	1,185	14.78 *
Slope Differences for Ethnicity	10	11	.0715	.0714	.00012	1	1,184	0.15
Intercept Differences for Ethnicity	11	12	.0714	.0665	.00486	1	1,185	6.20
Algebra 1985 - 1986	Freshm	en (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1199	.1197	.00024	1	708	0.20
Sex & Ethnicity Interaction Test	2	3	.1197	.1171	.00253	1	709	2.04
Slope Differences for Sex	7	8	.0614	.0597	.00165	1	712	1.25
Intercept Differences for Sex	ಕ	9	.0597	.0475	.01222	1	713	9.26 *
Slope Differences for Ethnicity	19	11	.1020	.0961	.00590	1	712	4.68
Intercept Differences for Ethnicity	11	12	.0961	.0475	.04357	1	713	38.31 *
Algebra 1984 - 1985	Sophom	ore (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0799	.0799	.00007	1	871	0.06
Sex & Ethnicity Interaction Test	2	3	.0799	.0762	.00364	1	872	3.45
Slope Differences for Sex	7	8	.0701	.0665	.00359	1	875	3.37
Intercept Differences for Sex	8	9	.0665	.0620	.00451	1	876	4.23
Slope Differences for Ethnicity	10	11	.0676	.0669	.00067	1	875	0.62
Intercept Differences for Ethnicity	11	12	.0669	.0620	.00488	1	876	4.58
Algebra 1985 - 1986	Sophor	ore (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0695	.0690	.00058	1	617	0.79
Sex & Ethnicity Interaction Test	2	3	.0690	.0564	.00255	1	618	1.69
Slope Differences for Scx	7	8	.0262	.0254	.00083	1	621	0.53
Intercept Differences for Sex	8	9	.0254	.0234	.00206	1	622	1.31
Slope Differences for Ethnicity	10	11	.0602	.0601	.00018	1	621	0.12
Intercept Differences for Ethnicity	11	12	.0600	.0234	.03669	1	622	24.28 *

Table 0-9. (Continued)

	Corr	parison		R <sup>2</sup>		_		
f-fest Companison	Full	Restricted	full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Algebra 1984 - 1985	Junior	(5thnicity	= White &	Black)		_		
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1250	.1241	.00097	1	489	0.54
Sex & Ethnicity Interaction Test	2	3	.1241	. 1226	.00153	1	490	0.86
Slope Differences for Sex	7	8	.0956	.0956	.00002	1	493	0.01
Intercept Differences for Sex	8	2	.0956	.0872	.00840	1	494	4.59
Slope Differences for Ethnicity	10	11	.1132	.1011	.01204	1	493	6.69
Intercept Differences for Ethnicity	11	12	.1011	.0872	.91391	1	494	7.64 *
Algebra 1985 - 1986 Junio	r (Eth	nicity not te	sted)					
Slope Differences for Sex	7	8	.0346	.0336	.00096	1	273	0.27
Intercept Differences for Sex	8	9	.0336	.0336	.00002	1	274	0.01
Algebra 1985 - 1986 Juni	or (Etr	micity = Whit	e & Nonwh	ite) (Sex not	test <b>e</b> d)			
Slope Differences for Ethnicity	10	11	. 1035	.0818	.02173	1	273	6.62
Intercept Differences for Ethnicity	11	12	.0818	.0336	.04821	1	274	14.39 **
Geometry 1985 - 1986 Fresh	imen (F	thnicity not	tested)					
Slope Differences for Sex	7	8	.0478	.0463	.00144	1	511	0.77
Intercept Differences for Sex	8	9	.0463	.0434	.00295	1	512	1.58
Geometry 1985 - 1986 Freshmer	(Ethn	icity = White	Black &	Hispanic) (Se	x not testi	ed)		
Stope Differences for Ethnicity	10	11	.1160	, 0949	.02115	2	509	6.09 *
Geometry 1984 - 1985 Sophon	nore (8	thnicity not	tested)					
Slope Differences for Sex	7	8	.0167	.0098	.00688	1	561	3.93
Intercept Differences for Sex	8	9	.0098	.0097	.00012	1	562	0.07
Geometry 1984 - 1985 Sophomor	e (Ethi	nicity = White	. Black &	: Hispanic) (S	ex not tes	ted:		
Slope Differences for Ethnicity	10	11	.0361	.0333	.00280	5	559	0.81
Intercept Differences for Ethnicity	11	12	.0333	.0097	.02363	2	561	6.86 *
General Science 1984 - 19	085 Fre	shinen (éthinío	itv = Uhi	ite Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1430	.1418	.00121	2	1,956	1.38
Sex & Ethnicity Interaction Test	2	3	.1418	.1249	.01689	2	1,958	19.27 *
Consistent Over or Under prediction of Subgroup	2	4	.1418	.1279	.01394	3	1,958	10.60 *
Stope Differences for Sex	2	5	.1418	.1380	.00380	1	1,958	8.68 *
و کاری - General Science 1985 کاری - General Science 1985 کاری داد	[reshmo	n (Ethnicity	not testo	nd)				
Stope Differences for Sex	7	8	.0586	.0562	.00241	1	274	0.70
Intercept Differences for Sex	8	9	.0562	.0554	.90977	1	275	0,23
General Science 1985 - 1986	S Frachi	men (Ethnicity	/= White	& Black) (Sex	not teste	d)		
25/16/18/2 30/16/16/2 17/3		-						
Slope Differences for Ethnicity	10	11	.0814	.0653	.01603	1	246	4.19

Table 0-9. (Continued)

	Co	mparison	· · · · · · · · · · · · · · · · · · ·	R <sup>2</sup>				
Test Companison	Full	Restricted	Full	Restricted	1 <sup>2</sup> Change	df 1	df2	į.
General Science 1984 - 1	1985 Sop	homore (Ethnic	ity = Wh	ite & Nonwhite	e)			
way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1870	.1844	.00261	1	341	1.10
* & Ethnicity Interaction Test	2	3	. 1844	.1707	.01374	1	342	5.76
ope Differences for Sex	7	8	. 1706	. 1673	.00332	1	345	1.38
ercopt Differences for Sex	8	9	. 1673	.1628	.00444	1	346	1.85
ope Differences for Ethnicity	10	11	.1627	.1628	.00005	1	345	0.02
twicept Differences for Ethnicity	11	12	. 1628	.1628	.00002	1	346	0.01
Gu . Science 1985 - 1986 :	Sophonior	e (Ethnicity r	not teste	d)				
ope Differences for 8	7	8	.0610	.9610	.00003	1	183	0.01
tercept Differences for Sex	8	9	.0610	.0486	.01245	1	184	2.44
General Science 1985 - 1986	5 Softion	ore (Ethnicity	= White	& Black) (Sex	not tested	d)		
upe Differences for Ethnicity	10	11	. 1869	.1709	.01604	1	158	3.12
tercept Differences for Ethnicity	11	12	.1708	. 0689	.10197	1	159	19.55 **
General Science 1984 - 1985	Junior	(Ethracity no	t tested)					
epe Differences for Sex	7	8	.0467	.0354	.01136	1	174	80.5
tercept Differences for Sex	8	9	.0354	.0247	.01070	1	175	1.94
General Science 1984 - 1	985 Jurn	or (Ethnicity	= ₩hite &	Black) (Sex	not tested	)		
me toller enter for Ethnicity	10	11	. 1432	.1437	.00000	1	149	0.00
tercept Differences for Ethnicity	11	12	.1432	.0244	.11872	1	150	20.78 **
General Science 1905 - 1986	Junior	([thnicity no	t tested)					
Gir billionices for Son	7	8	.0790	.0574	.021/3	1	258	6.06
tercept Differences for Sex	8	Ÿ	.0574	.0570	.00037	1	259	U.10
General Schence 1985 - 198	6 Junior	(Ethnicity # )	White & N	onwhite) (Sex	not teste	d)		
Ge Differences for Ethinicity	10	1;	.1558	8990.	.03400	1	251	10.13 *
81010g, T + 11 1985 + 1985	Fileshow:	i (Ethnicity n	or tested	l)				
GA bitterenres for Str	7	8	.0815	.ŭ798	.00170	1	299	0.35
torcept Differences for Sex	8	Ý	.0799	.0776	.06227	1	<b>3</b> 00	0.74
Brotogy 1 - 11 198 - 1985	Freshag	n (Fthnicity •	White &	Nonwhite) (Sc	not test	ed)		
e Differences for Ethnicity	10	11	. 1035	.1035	. 00001	1	544	0.60
tarcept Differences for Ethnicity	11	12	. 1035	.0776	.02591	1	300	8.67
Erotogy 1 - 11 1985	1986 i c	shoch (13th).c	ity « whi	te & Binch)				
. Into ion lest (Abostissor's thinicity)	1	2	.6812	.0803	.00096	1	1,119	1.17
in those by frior metric lost	è	3	, 191, 1 <b>5</b>	.0791	.00126	1	1,120	1.46
↓ U fix erices for Ser	7	ខ	. 6541	.9487	.00534	1	1,125	6.34
Acres to the macy for Ser	દ	ý	.0487	9418	56900	1	1,124	8.10 •
is a test scenars for Ethinetty	10	1.1	78	16.6.3	.60749	1	1,123	9.02 •
to copt brifficiences, for Ethicienty	11	12	, 6693	.9418	.01853	1	1,124	22.16

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<u>Table D-9</u>. (Continued)

	Co	mparison		,2				F
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	
General Science 1984 -	1985 Sop	homore (Ethni	city = Wh	ite & Nonwhite	e)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1870	.1844	.00261	1	341	1.1
Sex & Ethnicity Interaction Test	2	3	.1844	.1707	.01374	1	342	5.7
Slope Differences for Sex	7	8	. 1706	.1673	.00332	1	345	1.3
Intercept Differences for Sex	8	9	.1673	.1628	.00444	1	346	1.8
Slope Differences for Ethnicity	10	11	.1629	.1628	.00005	1	345	0.0
Intercept Differences for Ethnicity	11	12	.1628	.1628	.00002	1	346	0.0
General Science 1985 - 1986	Sophomore	e (Ethnicity	not tested	d)				
Slope Differences for Sex	7	8	.0610	.0610	.00003	1	183	0.0
intercept Differences for Sex	8	9	.0610	.0486	.01245	1	184	2.4
General Science 1985 - 198	36 Sophom	ore (Ethnicity	= White &	ß Black) (Sex	not tested	i)		
Clope Differences for Ethnicity	10	11	.1869	. 1709	.01604	1	158	3.1
ntercept Differences for Ethnicity	11	12	.1708	.0689	.10197	1	159	19.5
General Science 1984 - 198	Junior	(Ethnicity no	t tested)					
lope Differences for Sex	7	8	.0467	.0354	.01138	1	174	2.0
ntercept Differences for Sex	8	9	.0354	.0247	.01070	1	175	1.9
General Science 1984 - 1	1985 Junio	or (Ethnicity	= White &	Black) (Sex	not tested)	)		
lope Differences for Ethnicity	10	11	.1432	.1432	.00000	1	149	0.0
ntercept Differences for Ethnicity	11	12	.1432	.0244	.11872	1	150	20.7
General Science 1985 - 1986	5 Junior	(Ethnicity no	t tested)		•			
lope Differences for Sex	7	8	.0790	.0574	.02163	1	258	6.0
ntercept Differences for Sex	8	9	.0574	.0570	.00037	1	259	0.1
General Science 1985 - 198	36 Junior	(Ethnicity = 1	⊌hite & No	onwhite) (Sex	not tested	i)		
lope Differences for Ethnicity	10	11	.1338	.0998	.03400	1	258	10.1
Biology I - II 1984 - 1985	Freshmen	(Ethnicity n	ot tested	)				
lope Differences for Sex	7	8	.0815	.0798	.00170	1	299	0.5
ntercept Differences for Sex	8	9	.0799	.0776	.00227	1	300	0.7
Biology I - II 1984 - 1985	5 Freshme	n (Ethnicity =	White & A	lonwhite) (Sex	k not teste	d)		
lope Differences for Ethnicity	10	11	.1035	.1035	.00001	1	299	0.0
ntercept Differences for Ethnicity	" <b>11</b>	12	.1035	.0776	.02591	1	300	8.6
Biology I - II 1985 -	1986 Fre	shmen (Ethnic	ity = Whi1	te & Black)				
-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0812	.0803	.00096	1	1,119	1.1
ex & Ethnicity Interaction Test	2	3	.0803	.0791	.00120	1	1,120	1.4
lope Differences for Sex	7	8	.0541	.0487	.00534	1	1,123	6.3
ntercept Differences for Sex	8	9	.0487	.0418	.00692	1	1,124	8.1
Slope Differences for Ethnicity	10	11	.0678	.0603	.00749	1	1,123	9.0
intercept Differences for Ethnicity	11	12	.0603	.0418	.01853	1	1,124	22.1

<u>lable D-9</u>. (Continued)

	Cor	mparison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	af2	È
Biology I - II 1984 - 1	985 Sopho	omore (Ethnic	ity = ₩hi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0975	.0971	.00040	2	1,371	0.30
Sex & Fthnicity Interaction Test	2	3	.0971	.0926	.00457	2	1,373	3.47
Slope Differences for Sex	7	8	.0789	.0786	.00026	1	1,379	0.38
Intercept Differences for Sex	8	9	.0786	.0778	.00085	1	1,380	1.28
Slope Differences for Ethnicity	10	11	.0914	.0892	.00215	2	1,377	1.63
Intercept Differences for Ethnicity	11	12	.0892	.0778	.01148	2	1,379	8.69
Biology I - II 1985 - 1986	Sophomore	Ethnicity:	not tested	d)				
Slope Differences for Sex	7	8	.1013	.1011	.00026	1	335	0.10
Intercept Differences for Sex	8	9	.1011	.0776	.02346	1	336	8.77
Biology I - II 1985 - 1986 Sop	homore (E	thnicity = Wh	ite, Black	( & Hispanic)	(Sex not t	ested	)	
Slope Differences for Ethnicity	10	11	.1141	.0930	.02101	2	333	3.95
intercept Differences for Ethnicity	11	12	.0930	.0776	.01541	2	335	2.85
Biology I - II 1984 -	1095 tum	vios (Ethnicis	ru - Uhita	e & Nonwhite)				
i-way Interaction Test (ASVAB*sex*ethnicity)	1965 301	2	.1384	.1384	.00001	1	397	0.00
ex & Ethnicity Interaction Test	2	3	.1384	.1208	.01757	1	398	8.12
lope Differences for Sex	7	8	.0680	.0533	.01464	1	401	6.30
Intercept Differences for Sex	, 8	9	.0533	.0495	.00383	1	402	1.62
Rope Differences for Ethnicity	10	11	.1056	.0821	.02346	1	401	10.52
ntercept Differences for Ethnicity	11	12	.0821	.0495	.03262	1	402	14.29
·			10021			•	102	,,,,,,
Biology I - II 1985 - 1986		-						
lope Differences for Sex	7	8	.1645	.1604	.00404	1	147	0.71
ntercept Differences for Sex	8	9	.1604	. 1374	.02299	1	148	4.05
Biology I - II 1984 - 1985	Senior	(Ethnicity not	tested)					
lope Differences for Sex	7	8	.0698	.0695	.00022	<b>1</b>	195	0.05
ntercept Differences for Sex	8	9	.0695	.0540	.01550	1	196	3.26
Biology I - 11 1984 - 19	85 Senior	(Ethnicity =	White & E	Black) (Sex no	t tested)			
lope Differences for Ethnicity	10	11	.2968	-2966	.00012	1	176	0.03
ntercept Differences for Ethnicity	11	12	.2966	.0681	.22853	1	177	57.51
Chemistry I - II 1985 - 1986	Freshmen	(Ethnicity r	ot tested	i)				
lope Differences for Sex	7	8	.1104	.1074	.00294	1	128	0.42
ntercept Differences for Sex	8	9	.1076	.1026	.00483	1	129	0.70
Chemistry I - II 1985 - 1986 :	Sophomore	(Ethnicity r	ot tested	1)				
lope Differences for Sex	7	8	.0410	.0386	.00234	1	430	1.05
ntercept Differences for Sex	8	9	.0386	.0153	.02334	1	431	10.46

<u>Table D-9</u>. (Continued)

	Cor	mparison		R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	ę.
Chemistry I - II 1984 - 198	5 Junior	(Ethnicity no	ot tested	)	<del>-</del>			
Slope Differences for Sex	7	8	.0328	.0328	.00000	1	426	0.00
Intercept Differences for Sex	8	9	.0328	.0185	.01429	1	427	6.31
Chemistry i - II 1984 - 19	85 Junio	r (Ethnicity =	White &	Nonwhitc) (Se.	x not test	ed)		
Slope Differences for Ethnicity	10	11	.0259	.0224	.00353	1	426	1.54
Intercept Differences for Ethnicity	11	12	.0224	.0185	.00389	1	427	1.70
Physics 1 - 11 1985 - 1986	Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.0829	.0618	.02104	1	232	5.32
Intercept Dif erences for Sex	8	9	.0618	.0568	.00503	1	233	1.25
Government & Civics 1984 - 19	85 Fresh	men (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.1225	.1158	.00669	1	344	2.62
Intercept Differences for Sex	8	9	.1158	.1157	.00011	1	345	0.04
Government & Civics 1984 - 198	5 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.0997	.0996	.00004	1	155	0.01
Intercept Differences for Sex	8	٥	.0996	.0918	.00778	1	156	1.35
Government & Civies 1985 - 198	6 Sophom	ore (Ethnicit	y not tes	(tea)				
Slope Diffarences for Sex	7	8	.1076	.1062	.00140	1	417	0.65
Intercept Differences for Sex	8	9	.10.2	.1043	.00192	1	418	0.90
Government & Civics 1985 - 19	86 Sopho	more (Ethnicit	y = White	& Hispanic)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	. 1655	. 1652	.00026	1	388	0.12
Intercept Differences for Ethnicity	11	12	. 1652	.1245	.04072	1	389	18.97 *
Government & Civics 1984 - 19	85 Junio	or (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.0607	. 0563	.00439	1	456	2.13
Intercept Differences for Sex	8	ç	.0563	.0523	.00399	1	457	1.93
Government & Civics 1984 - 1	905 Juni	or (Ethnicity	= White &	Nonwhite) (S	ex not tes	ted)		
Slope Differences for Ethnicity	1 C	11	. 1085	.1032	.00529	1	456	2.70
Intercept Differences for Ethnicity	11	12	. 1032	.0523	.050 <del>%</del>	1	457	25.92 •
Government & Civics 198	15 - 1986	Junior (Ethn	icity = k	/nite & Glack)	•			
3-way Interaction Test (AST/AB#sex*ethnicity)	1	ž	.1096	.1063	.00334	1	707	2.67
Sex & Ethnicity Interaction Yest	2	3	.1063	.1(62	.00009	1	708	0.07
Slope Differences for Sex	7	8	.0665	.0597	.00679	1	711	5.17
Intercept Differences for Sex	8	ý	.0597		\$6000.	1	712	4.56
Slope Differences for Ethnicity	10	11	.0953	.0768	.61850	1	711	14.54

Table D-9. (Continued)

	Co	mparison	(	22				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Chang <i>e</i>	df1	df2	F
Government & Civics 1984	- 1985	Senior (Eth	nicity = W	nite & Bluck)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0965	.0962	.00027	1	602	0.18
Sex & Ethnicity Interaction Test	2	3	.0962	.0961	.00004	1	603	0.03
Slope Differences for Sex	7	8	.0822	.0816	.00069	1	606	0.45
Intercept Differences for Sex	8	9	.0816	.0814	.00015	•	607	0.10
Slope Differences for Ethnicity	10	11	.0945	.0921	.00245	1	606	1.64
Intercept Differences for Ethnicity	11	12	.0921	.0814	.01067	1	607	7.13 *
History 1984 - 1985	Freshme	n (Ethnicity	= White,	Black & Hispar	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1371	. 1363	.00083	2	1,319	0.63
Sex & Ethnicity Interaction Test	2	3	. 1363	. 1261	.01018	2	1,321	7.78 *1
ASVAB*Ethnicity ASVAB*Sex Interaction Test	2	4	.1363	.0784	.05791	6	1,321	14.76 **
Slope Differences for Sex	2	5	.1363	.0654	.07087	5	1,321	21.68 **
Slope Differences for Ethnicity	2	6	. 1363	.0255	.11076	6	1,321	28.23 *1
History 1985 - 1986	Freshme	n (Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1273	. 1273	.00006	1	1,343	0.10
Sex & Ethnicity Interaction Test	2	3	. 1273	.1273	.00000	1	1,344	0.01
Slope Differences for Sex	7	8	.1111	.1105	.00055	1	1,347	U.84
Intercept Differences for Sex	8	9	.1105	. 1105	.00000	1	1,348	0.00
Slope Differences for Ethnicity	10	11	. 1264	. 1236	.00279	1	1,347	4.30
Intercept Differences for Ethnicity	11	12	. 1236	.1105	.01314	1	1,348	20.21 **
History 1984 - 1985	Souhomo	re (Ethnicit	y = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1360	.1360	.00000	1	1,430	0.00
Sex & Ethnicity Interaction Test	2	3	. 1360	.1350	.00098	1	1,431	1.62
Slope Differences for Sex	7	8	. 1144	.1109	.00355	1	1,434	5.75
Intercept Differences for Sex	8	9	.1109	.1107	.00016	1	1,435	0 25
Slope Differences for Ethnicity	10	11	. 1301	. 1299	.00018	1	1,434	0.30
Intercept Differences for Ethnicity	11	12	. 1299	.1107	.01915	1	1,435	31.57 *
History 1985 - 1986	Sophono	ore (Ethnicis	y = White,	Black & Hisp				
3-way Interaction Test (ASVAB*sex*ethnic:ty)	1	2	. 1353	.1348	.00046	2	1,465	0.39
Sex & Ethnicity Interaction Test	2	3	. 1348	.1259	.00894	2	1,467	7.58 *
Consistent Over or Under prediction of Subgroup	2	4	. 1348	.1142	.02066	3	1,467	11.68 *
Sloph Differences for Sex	2	5	. 1348	. 1337	.00109	1	1,467	1.85
History 1984 - 198	35 Junio	or fEthnicity		Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	5	. 1594	. 1584	.00104	1	1,102	1.37
Sex & Ethnicity Interaction Test	2	3	. 1584	. 1568	.00155	1	1,103	2.03
Stope Differences for Sec	7	£	. 0945	.0943	. 00015	1	1,106	0.18
Intercupt Differences for Sex	8	Ŷ	.0943	.0881	.00628	1	1,107	7.65 •
Slop- Differences for Ethnicity	10	11	. 1493	. 1431	.00617	1	1,106	8.03 *
Intercept Differences for Ethnicity	11	12	. 1431	1880,	.05507	1	1,107	71.15 *

Table 0-9. (Continued)

	Cor	mparison	-	2				
F-Test Comparison	full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
History 1985 - 1986 Jun	ior (Et	hnicity not tes	sted)	<del></del>	<del></del>			
Slope Differences for Sex	7	8	.1030	.0978	.00321	1	<b>428</b>	1.53
Intercept Differences for Sex	8	9	. 0998	.0850	.01474	1	429	7.03 *
History 1985 - 1986	Junior (i	Ethnicity = Wh	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1281	.1215	.00658	1	409	3.09
Intercept Differences for Ethnicity	11	12	. 1215	.0865	.03495	1	410	16.31 **
History 1984 - 1985 Sen	ior (Eti	hnicity not tes	sted)					
Slope Differences for Sex	7	8	. 1313	.1311	.00026	1	423	0.13
Intercept Differences for Sex	8	9	.1311	.1310	.00001	1	424	0.00
History 1984 - 1985	Senior (	Ethnicity = Wh	ite & Bla	ck) (Sex not	tes <b>ted</b> )			
Slope Differences for Ethnicity	10	11	.2198	.2164	334	1	402	1.72
Intercept Differences for Ethnicity	11	12	.2164	.1428	357	1	403	37.84 **
foreign Language 1984 - 1985	Freshme	n (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	. 1232	.1227	.00051	1	1,012	0.59
Intercept Differences for Sex	8	9	.1227	. 1090	-01377	1	1,013	15.90 **
Foreign Language 1984 - 1985 Fr	eshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.1154	.1120	.00331	2	1,010	1.89
Intercept Differences for Ethnicity	11	12	.1120	. 1690	.00309	2	1,012	1.76
Foreign Language 1985 - 1986	Freshme	n (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.0806	.0791	.00145	1	797	1.26
Intercept Differences for Sex	8	9	.0791	.0624	.01673	1	798	14.50 **
Foreign Language 1985 - 1986 fr	eshmen (	Ethnicity = Wh	ite, Blac	( & Hispanic)	(Sex not	<b>te</b> sted	)	
Slope Differences for Ethnicity	10	11	.0686	.0674	.00119	2	795	0.51
Intercept Differences for Ethnicity	11	12	.0674	.0624	.00506	5	797	2.16
Foreign Language 1984 - 1985	Sophomor	e (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.1076	.1023	.00531	1	872	5.31
Intercept Differences for Sex	8	9	. 1023	.0748	.02756	1	893	27.41 *1
Foreign Language 1984 - 1985 Sc	phonone	(Ethnicity = W	nite, Bla	ck & Hispanio	) (Sex not	teste	d)	
Slope Differences for Ethnicity	10	11	.0760	.0751	.00091	2	890	0.44
Intercept Differences for Ethnicity	11	12	. 0751	.9747	، ۱۵۵۵۲۰	5	845	0.19
Foreign Languagh 1985 -	1986 55	phomor <b>e (</b> Ethn	icity = W	hite & Nonwhi	te)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0680	.0677	.00028	1	604	C.18
Sex & Ethnicity Interaction Test	2	3	.0677	.0677	.00003	1	605	0.02
Stope Differences for Sex	7	n	.0613	.0592	. 60202	1	808	1.31
Intercept Differences for Sex	8	Ŷ	. 0592	.0412	.01804	1	609	11.68 *
Slope Differences for Ethnicity	10	11	.0462	.0435	. 20295	1	608	1.88
Intercept Differences for Ethnicity	11	12	.0433	.0412	.00209	1	609	1.33

<u>Table D-9</u>. (Continued)

	Cor	nparison		R <sup>2</sup>				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Foreign Language 1984 - 1	985 Junior	(Ethnicity no	t tested	·				
Slope Differences for Sex	7	8	.1129	.1102	.00274	1	480	1.49
Intercept Differences for Sex	8	9	.1102	.0705	.03961	1	481	21.41 **
Foreign Language 1984 - 1985	Junior (E	thnicity = Whit	te, Black	& Hispanic)	(Sex not te	ested)		
Slope Differences for Ethnicity	10	11	.1000	.0780	.02197	2	478	5.83 *
Foreign Language 1985 - 1	986 Junior	(Ethnicity no	ot tested	)				
Stope Differences for Sex	7	8	.0698	.0651	.00473	1	247	1.26
Intercept Differences for Sex	8	9	. 0651	.0610	.00410	1	248	1.09
Foreign Language 1985 -	1986 Junio	r (Ethnicity =	White &	Hispanic) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.0807	. 0565	.02420	1	205	5.40
Intercept Differences for Ethnicity	11	12	.0565	.0510	.00543	1	206	1.19
Secretary & Office Education 1	985 - 1986	Junior (Ethnic	city = Wh	ite & Nonwhit	e) (Sex no	t test	<b>1</b> )	
Slope Differences for Ethnicity	10	13	.0676	.0673	.00033	1	215	0.08
Intercept Differences for Ethnicity	11	12	.0673	.0610	.00625	1	216	1.45
Secretary & Office Education 1	984 - 1985	Senior (Ethnic	city = Wh	ite & Nonwhit	e) (Sex no	t test	ed)	
Slope Differences for Ethnicity	10	11	.0363	. 0236	.01273	1	220	2.91
Intercept Differences for Ethnicity	11	12	.0236	.0201	.00351	1	221	0.80
Typing & Word Processing 1984	- 1985 fre	shmen (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.1247	. 1159	.00884	1	507	5.12
Intercept Differences for Sex	8	9	.1159	.1159	.00001	1	508	0.00
Typing & Word Processing 198	4-1985 Fre	shmen (Ethnici	ty = Whit	e, Black & Hi	spanic) (S	ex not	tested)	
Slope Differences for Ethnicity	10	11	.1601	. 1572	.00296	2	505	0.89
Intercept Differences for Ethnicity	11	12	. 1572	.1159	.04130	2	507	12.42**
Typing & Word Processing 1985	- 1986 Fre	shmen (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.0721	.0677	.00441	1	492	2.34
Intercept Differences for Sex	8	9	.0677	.0655	.00218	1	493	1.15
Typing & Word Processing 198	35-1986 Fre	shmen (Ethnici	ty = Whit	e & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.0979	.0913	.00662	1	445	3.27
Intercept Differences for Ethnicity	11	12	.0913	.0888	.00251	1	446	1.23
Typing & Word Processing 1984	1985 Suph	omore (Ethnic	ity not t	ested)				
Stope Differences for Sex	7	8	.1002	.0898	.01047	1	631	7.34 *
Typing & Word Processing 1984	- 1985 Soph	omore (Ethnici	ty = Whit	e, Black & H	ispanic) (S	ex not	(ested)	)
Slope Differences for Ethnicity	10	11	. 0966	.0955	.00111	2	629	0.39
Intercept Differences for Ethnicity	11	12	. 0955	.0846	.01087	2	631	3.79
•								

Table D-9. (Continued)

	Com	parison		2	·			
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Typing & Word Processing 1984	- 1985 Jun	ior (Ethnici	ty not te	sted)		-		
Slope Differences for Sex	7	8	.1046	. 1022	.00249	1	391	1.09
Intercept Differences for Sex	8	4	.1021	.0870	.01515	1	392	6.62
Typing & Word Processing 198	4 - 1985 J	unior (Ethnic	ity = Whi	te & Black) (	Sex not tes	sted)		
Slope Differences for Ethnicity	10	11	.0976	.0944	.00317	1	359	1.26
Intercept Differences for Ethnicity	11	12	.0944	. 0897	.00474	1	360	1.88
Typing & Word Processing 1985	- 1986 Jun	ior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.0526	.0441	.00850	i	221	1.98
Intercept Differences for Sex	8	9	.0441	.0411	.00302	1	222	0.70
Typing & Word Processing 198	5- <b>1986 Ju</b> n	ior (Ethnicit	y = White	& Nonwhite)	(Sex not to	est <b>e</b> d)		
Slope Differences for Ethnicity	10	11	.1069	. 0964	.01057	1	221	2.61
Intercept Differences for Ethnicity	11	12	.0964	.0411	.05531	1	222	13.59**
Typing & Word Processing 1984	- 1985 Sen	ior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.0865	. 0835	.00306	1	216	0.72
Intercept Differences for Sex	8	9	.0835	.0806	.00288	1	217	0.68
Accounting/Bookkeening 1985 -	1986 <b>Soph</b> a	more (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.0425	. 04 14	.00115	1	311	0.37
Intercept Differences for Sex	8	9	.0414	.0239	.01748	1	312	5.69
Accounting/Bookkeeping 1984 -	1985 Juni	or (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.1104	. 1102	.00023	1	239	0.06
Intercept Differences for Sex	8	9	. (102	.0827	.02746	1	240	7.41 *
Accounting/Bookkeeping 1985 -	1986 Juni	or (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.0704	. ( c-^o	.00141	1	185	9.28
Intercept Differences for Sex	8	9	.0690	J3598	.00916	1	186	1.83
Accounting/Bookkeeping 1984	1985 Seni	or (Ethnicit	y riot tes	ited)				
Slope Differences for Sex	7	8	. 1344	.1212	.01322	1	247	3.77
Intercept Differences for Sex	8	9	.1212	.0997	.02149	i	248	6.06
Home Economics 1984 - 1985	Cochmon	/Ethoicity n	ot testes	15				
Slope Differences for Sex	7	8	.1991	. 1991	.00001	1	547	0.01
Intercept Differences for Sex	8	9	.1991	. 1805	.01858	1	548	12.72 *
Theoret by the character for bear	J	,	••••			·		
Home Economics 1984-1985	Freshmin 10	(Ethnicity = 11	₩hite & 8 ,2470		ot tested) .00130	1	519	0.89
Slope Differences for Ethnicity				. 2457	.98860			61.08**
Intercept Differences for Ethnicity	11	12	.2457	. 1571	.70000	1	520	01.00
Home Economics 1985 - 1986		· ·				_		,
Slope Differences for Sex	7	8	, 1351	, 1331	.00204	1	312	9.74
Intercept Differences for Sex	8	9	. 1331	.0216	.04143	1	313	14.96

Table D-9. (Continued)

	Cor	aparison	1	χέ				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1985-19	86 Freshmen	(Ethnicity = )	Mite & N	onwhite) (Sex	not tested	1)		
Slope Differences for Ethnicity	10	11	.1162	. 1094	.00877	1	312	3.10
Intercept Differences for Ethnicity	11	12	.1094	.0916	.01776	1	313	6.24
Home Economics 1984 - 19	85 Sophemore	e (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	ಕ	.1202	. 1196	.00056	1	321	ე.20
Intercept Differences for Sex	8	9	.1196	.1008	.01883	1	322	6.89 *
Home Economics 1984-198	5 Sophomore	(Ethnicity = 1	white & N	onwhite) (Sex	not tested	4)		
Slope Differences for Ethnicity	10	11	. 1692	.1518	.01742	1	321	6.73*
Home Economics 1925 - 19	86 Sophomor	e (Ethnicity	not iaste	d)				
Slope Differences for Sex	. 7	8	.1136	.1067	.01287	1	394	5.72
Intercept Differences for Sex	8	9	. 1007	.0841	.01668	1	395	7.33 *
Home Economics 1985-198	6 Sophomore	(Ethnicity = 1	White & N	orwhite) (Sex	not tested	<b>d)</b>		
Slope Differences for Ethnicity	10	11	.0964	.0900	.00642	1	394	2.80
Intercept Differences for Ethnicity	11	12	.0900	.0841	.00596	1	<b>3</b> 95	2.59
Home Economics 1984 - 1	985 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.0636	.0627	.00085	1	279	0.25
Intercept Differences for Sex	8	9	.0627	.0505	.01222	1	280	3.65
Nome Economics 1984-19	85 Junior (	Ethnicity = Wh	ite & Non	nwhite) (Sex r	ot tested)			
Slope Differences for Ethnicity	10	11	.0732	.0723	.00093	1	279	0.28
Intercept Differences for Ethnicity	11	12	.0723	.0505	.02174	1	280	6.56
Home Economics 1985 - 1	986 Junior	(Ethnicity no	t tested)	1				
Slope Differences for Sex	7	8	.1260	.1247	.00128	1	358	0.52
Intercept Differences for Sex	8	9	. 1247	.0690	.05569	1	359	22.84 *
Home Economics 1985-19		·					700	1 04
Slope Differences for Ethnicity	10	11	.0812	.0764	.00477	1	358	1.86
Intercept Differences for Ethnicity	11	12	.0764	.0690	.00 <i>7</i> 38	1	359	2.87
Home Economics 1984 - 1		•				_		
Slope Differences for Sex	7	8	.0802	.0796	.00057	1	318	0.20
Intercept Differences for Sex	8	9	.0796	.0517	.02788	1	319	9.66 *
Home Economics 1984-1	985 Senior	(Ethnicity = W	hite & No	onwhite) (Sex	not tested	)		
Slope Differences for Ethnicity	10	11	.0581	.0565	.00162	1	318	0.55
Intercept Differences for Ethnicity	11	12	. 0565	.0517	.09478	1	319	1.62

<u>Table 0-9</u>. (Concluded)

i-Test Comparison	Cor	Comparison		<sup>R</sup> 2				
	Full	Restricted	rull	Restricted	R <sup>2</sup> Change	df1	df2	F
Computer Programming 1985 -	1986 Sophom	ore (Ethnicit	y not test	ted)				
Slope Differences for Sex	7	8	.0710	.0680	.00307	1	227	0.75
Intercept Differences for Sex	8	9	.0680	.0295	.03848	1	228	9.41
Computer Programming 1984	- 1985 Juni	or (Ethnicity	not test	rd)				
Slope Differences for Sex	7	8	.0446	.0270	.01753	1	240	4.40
Intercept Differences for Sex	8	9	.0270	.0237	.00330	1	241	0.82
Computer Programming 1985	- 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2122	.1952	.01698	1	157	3.38
Intercept Differences for Sex	8	9	.1952	.1416	.05361	1	158	10.53

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

Tepic D-10. F-Tests of Significance for Technical Composite

	Co	mparison	ſ	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfi	df2	F
English 1 - IV 1984 -	1985 Fre	shmen (Ethnici	ty = Whit	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1589	.1586	.00034	2	2,422	0.48
Sex & Ethnicity Interaction Test	2	3	. 1586	.1547	.00387	2	2,424	5.58 *
Slope Differences for Sex	7	8	. 1526	.1476	.00506	1	2,430	14.51 *
Slope Differences for Ethnicity	10	11	.0626	.0624	.00016	2	2,428	0.21
Intercept Differences for Ethnicity	11	12	.0624	.0593	.00313	2	2,430	4.06
English 1 - 1V 1985 -	1986 Fre	shmen (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	1193	.1186	.00074	2	1,989	0.83
Sex & Ethnicity Interaction Test	2	3	. 1186	.1158	.00283	2	1,991	3.20
Slope Differences for Sex	7	8	.0997	.0974	.00228	1	1 <b>,9</b> 97	5.05
Intercept Differences for Sex	8	9	.0974	.0337	.06368	1	1,998	140.96 *
Slope Differences for Ethnicity	10	11	.0517	.0494	.00238	2	1,995	2.50
Intercept Differences for Ethnicity	11	12	.0494	.0337	.01562	2	1,997	16.41 *
English I - IV 1984 -	1985 Soph	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1698	.1679	.00188	2	2,296	2.61
Sex & Ethnicity Interaction Test	2	3	. 1679	. 1673	.00054	2	2,298	0.74
Slope Differences for Sex	7	8	. 1625	.1491	.01342	1	2,304	36.92 *
Slope Differences for Ethnicity	10	11	.0649	.0641	.00077	2	2,302	0.95
Intercept Differences for Ethnicity	11	12	.0641	.0484	.01571	2	2,304	19.34 *
English I - IV 1985 -	1986 Soph	omore (Ethnic	ity = Whi	te, Black & H	(spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1733	.1731	.00019	2	1,942	0.23
Sex & Ethnicity Interaction Test	2	3	.1731	.1730	.60008	2	1,944	0.10
Slope Differences for Sex	7	8	. 1607	.1493	.01136	1	1,950	26.39 *
Slope Differences for Ethnicity	10	11	.0716	.0708	.00086	2	1,948	0.90
Intercept Differences for Ethnicity	11	12	.0708	.0400	.03082	2	1,950	32.54
English 1 - 1V 1984	- 1985 Ju	unior (Ethnici	tv = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1449	.1446	.00022	2	1,721	0.22
Sex & Ethnicity Interaction Test	2	3	.1446	.1441	.00055	2	1,723	0.56
Slope Differences for Sex	7	8	.1373	.1272	.01012	1	1,729	20.29
Slope Differences for Ethnicity	10	11	.0298	.0296	.00016	2	1,727	0.14
Intercept Differences for Ethnicity	11	12	.0296	.0102	.01939	2	1,729	17.28 *
						-	,	
English I - IV 3-way Interaction Test (ASVAB*sex*ethnicity)	' 1985 - 1 1	1986 Junior (Et 2	hnicity ≂ .1362	White & Blac .13√	.00007	1	1,258	0.11
-	2	3			.00007	1		0.11
Sex & Ethnicity Interaction Test	7	8	.1361	.1361	.01256		1,259	
Slope Differences for Sex Slope Differences for Ethnicity	10	11	.1338	.121 <b>3</b> .0209	.00025	1	1,262	18.30 4 0.33
•			.0212			1	1,262	
Intercept Differences for Ethnicity	11	12	.0209	.0046	.01629	;	1,263	21,01

Table D-10. (Continued)

	Co	mpariso	n	R	2				
F-Test Comparison	Full	Restr	icted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
English 1 - IV 1984 -	1985 Se	nior (	Ethnici	ty = White	, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.1200	. 1186	.00142	2	1,275	1.03
Sex & Ethnicity Interaction Test	2		3	.1186	.1169	.00171	2	1,277	1.24
Slope Differences for Sex	7		8	.1103	. 1013	.00900	1	1,283	12.98 **
Slope Differences for Ethnicity	10	1	1	. 0443	.0428	.00155	2	1,281	1.04
Intercept Differences for Ethnicity	11	1	2	.0428	.0323	.01047	2	1,283	7.02 **
General Hath 1984 - 1	985 fres	hmen (	Ethnici	ty = White	, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.0472	.0457	.00146	2	1,167	0.89
Sex & Ethnicity Interaction Test	2		3	.0457	.0443	.00143	2	1,169	0.88
Slope Differences for Sex	7		8	.0399	.0397	.00010	1	1,175	0.12
Intercept Differences for Sex	8		9	.0397	.0208	.01894	1	1,176	23.20 **
Slope Differences for Ethnicity	10	1	1	.0251	.0224	.00275	2	1,173	1.65
Intercept Differences for Ethnicity	11	1	2	.0224	.0208	.00159	2	1,175	0.95
General Math 1984 - 1	1985 Soph	omore	(Ethnic	ity = Whit	e, Black & K	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	.0549	. 0481	.00679	2	736	2.65
Sex & Ethnicity Interaction Test	2		3	.0481	.0443	.00375	2	738	1.45
Slope Differences for Sex	7		8	.0341	.0329	.00126	1	744	0.97
Intercept Differences for Sex	8		9	.0329	.0242	.00870	1	745	6.70 *
Slope Differences for Ethnicity	10	1	11	.0321	.0313	.00087	2	742	0.33
Intercept Differences for Ethnicity	11	1	12	.0313	.0242	.00708	2	744	2.72
General Math 1985 - 1986	Junior	(Ethnic	city not	tested)					
Slope Differences for Sex	7		8	.0899	. 0864	.00347	1	222	0.85
Intercept Differences for Sex	8		9	.0864	.0276	.05877	1	223	14.35 **
General Math 1985 - 1986	5 Junior	(Ethnic	:ity = 1	hite & Bla	ack) (Sex not	test <b>ed</b> )			
Slope Differences for Ethnicity	10	•	11	.0457	. 0454	.00026	1	195	0.05
Intercept Differences for Ethnicity	11		12	.0454	.0362	.00924	1	196	1.90
General Math 1984 - 1985	Senior	(Ethnic	city not	t tested)					
Slope Differences for Sex	7		8	.0756	.0658	.00981	1	230	2.44
intercept Differences for Sex	8		9	. 0658	.0559	.00983	1	231	2.43
Genera: Math 1984 - 198	85 Senior	(Ethn	icity =	White & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10		11	.0870	.0867	.00024	1	203	0.05
Intercept Differences for Ethnicity	11		12	. 0867	.0659	.02081	1	204	4.65
Atgebra 1984 - 198	5 Freshme	en (Eti	hnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1		2	. 0904	.0835	.00187	1	1,180	2.42
Sex & Ethnicity Interaction Test	?		3	. 0885	.0878	.00073	1	1,181	0.94
Slope Differences for Sex	7		8	.0863	.0789	.00741	1	1,184	9.60 •
Intercept Differences for Sex	8		9	.0789	.0187	.06022	1	1,185	77.48 •
Slope Differences for Ethnicity	10		11	.0216	.0198	.00177	1	1,184	2.14
Intercept Differences for Ethnicity	11		12	.0198	.0187	.00115	1	1,185	1.39

Table 0-10. (Continued)

	Com	perison	1	,2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Algebra 1985 - 198	6 Freshmen	(Ethnicity	= White &	Nonwhite)				<del></del>
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1204	.1197	.00067	1	708	0.54
Sex & Ethnicity Interaction Test	2	3	.1197	.1184	.00130	1	709	1.04
Slope Differences for Sex	7	8	. 1046	.0960	.00856	1	712	6.80 *
Intercept Differences for Sex	8	9	.0960	.0276	.06849	1	713	54.02 **
Slope Differences for Ethnicity	10	11	.0510	.0497	.00137	1	712	1.03
Intercept Differences for Ethnicity	11	12	.0497	.0276	.02210	1	713	16.58 **
Algebra 1984 - 198	5 Sophomor	e (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0590	.0582	.00073	1	871	0.67
Sex & Ethnicity Interaction Test	2	3	.0582	.0521	.00613	1	872	5.68
Slope Differences for Sex	7	8	.0507	.0447	.00600	1	875	5.53
Intercept Differences for Sex	8	9	.0447	.0084	.03630	1	876	33.29 **
Slope Differences for Ethnicity	10	11	.0125	.0124	.00008	1	875	0.07
Intercept Differences for Ethnicity	11	12	.0124	.0084	.00404	1	876	3.58
Algebra 1985 - 198	46 Sophomor	e (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0858	.0842	.00163	1	617	1.10
Sex & Ethnicity Interaction Test	2	3	.0842	.0833	.00096	1	618	0.65
Slope Differences for Sex	7	8	.0701	.0642	.00588	1	621	3.92
Intercept Differences for Sex	8	9	.0642	.0302	.03401	1	622	22.60 **
Slope Differences for Ethnicity	10	11	.0466	.0461	.00048	1	621	0.31
Intercept Differences for Ethnicity	11	12	.0461	.0302	.01589	1	622	10.36 *
Algebra 1985 – 1986 Ju	unior (Eth	nnicity not te	ested)					
Slope Differences for Sex	7	8	.0333	.0227	.01054	1	273	2.98
Intercept Differences for Sex	8	9	.0227	.0140	.00871	1	274	2.44
Algebra 1985 - 1986 .	Junior (Eth	nnicity = Whit	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.0494	. 0485	.00087	1	273	0.25
Intercept Differences for Ethnicity	11	12	.0485	.0140	.03454	1	274	9.95 *
Geometry 1985 - 1986 Fo	reshmen (8	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1018	.0996	.00220	1	511	1.25
Intercept Differences for Sex	8	9	.0996	.0791	.02047	1	512	11.64 **
Geometry 1985 - 1986 Fresh	men (Ethn	icity = White,	Black &	Hispanic) (Se	x not test	∈d)		
Slope Differences for Ethnicity	10	11	.1011	. 1005	.00063	2	509	0.18
Intercept Differences for Ethnicity	11	12	.1005	.0791	.02136	2	511	6.07 *
Geometry 1984 - 1985 Soj	photore ()	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1179	.1152	.00276	1	561	1.75
Intercept Differences for Sex	, ,	9	.1152	.0745	.04065	1	562	25.82 *
Geometry 1984 - 1985 Sophi	omore (Ethi	nicity = White	e. Black A	: Hispanic) (S	Sex not tes	ted)		
Stope Differences for Ethnicity	10	11	.0858	.0801	.00575	2	559	1.76
SINGO DITTECPOORS INC FINNICITY					, ((, () ) ) ,		, , , ,	1 . 7 6 3

Table D-10. (Continued)

	Co	mparison	1	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Geometry 1985 - 1986 Sophor	more (	Ethnicity not t	ested)					
Slope Differences for Sex	7	8	. 1810	. 1789	.00205	1	410	1.03
Intercept Differences for Sex	8	9	. 1789	.1072	.07167	1	411	35.88 **
Geometry 1985 - 1986 So	phomore	(Ethnicity = 1	hite & B	lack) (Sex no	t test <b>e</b> d)			
Slope Differences for Ethnicity	10	11	. 1523	. 1453	.00703	1	371	3.08
Intercept Differences for Ethnicity	11	12	. 1453	. 1059	.03940	1	372	17.15 **
Geometry 1984 - 1985 Jun	ior (E	thnicity not te	ested)					
Slope Differences for Sex	7	8	.1360	.1245	.01155	1	305	4.08
Intercept Differences for Sex	8	9	.1245	.0688	.05564	1	306	19.45 **
Geometry 1984 - 1985 Ju	nior (E	thnicity = Whit	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.0732	.0701	.00317	1	305	1.04
Intercept Differences for Ethnicity	11	12	.0701	.0688	.00125	1	306	0.41
Geometry 1985 - 1986 Jun	ior (E	thnicity not te	ested)					
Slope Differences for Sex	7	8	. 1679	.1448	.02310	1	123	3.41
Intercept Differences for Sex	8	9	. 1448	.1015	.04325	1	124	6.27
Geometry 1985 - 1986 Ju	nior (E	thnicity = Whit	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.2123	.2103	.00204	1	123	0.32
Intercept Differences for Ethnicity	11	12	.2103	.1015	.10873	1	124	17.07 **
Geometry 1984 - 1985 Sen	ior (8	thnicity not to	ested)					
Slope Differences for Sex	7	8	.1442	. 1441	.00006	1	107	0.01
Intercept Differences for Sex	8	9	.1442	. 1389	.00530	1	108	U.67
Geometry 1984 - 1985 Se	nior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.1738	.1736	.00018	1	107	0.02
Intercept Differences for Ethnicity	11	12	. 1736	.1389	.03476	1	108	4.54
General Science 1984 - 1	985 Fre	eshmen (Ethnic	ity = Whi	te, Black & H	ispa <b>nic)</b>			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1445	. 1432	.00130	2	1,956	1.48
Sex & Ethnicity Interaction Test	2	3	. 1432	.1367	.00654	2	1,958	7.48 **
Consistent Over or Under prediction of Subgroup	2	4	. 1432	.1411	.00216	3	1,958	1.64
General Science 1985 - 1986	Freshme	en (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	.0997	.0902	.00947	1	274	2.88
Intercept Differences for Sex	8	9	.0902	.0649	.02537	1	275	7.67 *
General Science 1985 - 198	l6 Frest	nmen (Ethnicity	= White	& Black) (Sex	not teste	d)		
Slope Differences for Ethnicity	10	11	.0789	.0674	.01151	1	240	3.00
Intercept Differences for Ethnicity	11	12	.0674	.0658	.00159	1	241	0.41

Table D:10. (Continued)

	Co	mparison	1	<sub>8</sub> 2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Science 19	984 - 1985 Sop	nomore (Ethnic	ity = Wh	ite & Nonwhite	e)			
3-way Interaction Test (>SVAR*sex*ethnici	ty) 1	2	.1679	. 1667	.00120	1	341	0.49
Sex & Ethnicity Interaction Test	2	3	.1667	.15:0	.01484	1	342	6.09
Slope Differences for Sex	7	8	.1387	. 1359	.00281	1	345	1.13
Intercept Differences for Sex	8	9	.1359	. 0584	.07752	1	346	31.04 *
Slope Differences for Ethnicity	10	11	.0690	.0669	.00207	1	345	0.77
Intercept Differences for Ethnicity	11	12	.0669	.0584	.00853	1	346	3.16
General Science 1985 -	1986 Sophomor	e (Ethnicity r	not teste	d)				
Slope Differences for Sex	7	8	.1404	. 1392	.00124	1	183	0.26
Intercept Differences for Sex	8	9	.1392	.0804	.05878	1	184	12.56 *
General Science 1985	- 1986 Sophor	ore (Ethnicity	= White	& Biack) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	. 1335	. 1318	.00175	1	158	0.32
Intercept Differences for Ethnicity	11	12	.1518	.0841	.04772	1	159	8.74 *
General Science 1985	- 1986 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1088	. 1042	.00462	1	258	1.34
Intercept Differences for Sex	8	9	. 1042	. 0696	.03464	1	259	10.01 *
General Science 1985	- 1986 Junior	(Ethnicity = 1	⊌hite & N	onwhite) (Sex	not teste	۲)		
Slope Differences for Ethnicity	10	11	.0867	. 0865	.00018	1	258	0.05
Intercept Differences for Ethnicity	11	12	.0865	.0696	.01691	1	259	4.79
General Science 1984	- 1985 Senior	(Ethnicity no	t tested)	,				
Slope Differences for Sex	7	8	.1067	. 1053	.00137	1	107	0.28
Intercept Differences for Sex	8	9	.1053	.0533	.05204	1	183	10.64 *
Biology 1 - 11 1984 -	1985 Freshmer	(Ethnicity n	ot tested	1)				
Slope Differences for Sex	7	8	.1737	. 1723	.00138	1	299	0.50
Intercept Differences for Sex	8	9	.1723	. 1076	.96476	1	300	23.47 *
Biology 1 - 11 1984	- 1985 Freshme	n (Ethnicity =	White &	Nonwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.1199	.1143	.00562	1	299	1.91
Intercept Differences for Ethnicity	11	12	. 1143	. 1076	.00674	1	300	2.28
Biolog <sub>)</sub> I - 11 1	985 - 1986 Fre	shmen (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnici	ty) 1	2	.0920	.0902	.00176	i	1,120	2.17
Sex & Ethnicity Interaction Test	5	3	. 693 ،	.0925	.00056	1	1,120	0.70
Slope Differences for Sex	7	8	.0908	.0879	.00293	;	1,123	3.62
Intercept Differences for Sex	8	9	1879	.0357	.05219	1	1,124	64.31
Stope Differences for Ethnicity	10	11	.0436	.0403	.00u <b>38</b>	1	1,123	0.44
Intercept Differences for Ethnicity	11	12	.0403	.0357	.00453	1	1,124	5.31

Table D-10. (Continued)

	Con	nparison	, i	2				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfj	df2	F
Biology I - 11 1984 -	1985 Sopho	omore (Ethnic	ity≃ ⊌hi	te, Black & H	ispanic)	•		
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1134	.1108	.00257	2	1,371	1.99
Sex & Ethnicity Interaction Test	2	3	.1108	.1086	.00217	2	1,373	1.68
Slope Differences for Sex	7	8	.1011	. 0930	.00818	1	1,379	12.55 **
Slope Differences for Ethnicity	10	11	.0546	.0533	.00134	2	1,377	0.98
Intercept Differences for Ethnicity	11	12	.0533	.0531	.00017	2	1,379	0.12
Biology I - II 1985 - 1986	Sophomore	≘ (Ethnicity (	not teste	d)				
Slope Differences for Sex	7	8	.1262	. 1044	177ءن.	1	335	8.35 *
Biology I - II 1985 - 1986 Sc	ophomore (	Ethnicity = Wh	ite, Blac	k & Kispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.0250	.0230	.00199	2	333	0.34
Intercept Differences for Ethnicity	11	12	.0230	.014%	.00348	2	335	1.45
Biology 1 - 11 1984	- 1985 Jui	nior (Ethnici	ty = Whit	e Nonwhite)				
<pre>3-way Interaction lest (ASVAB*sex*ethnicity)</pre>	1	2	.1470	. 1467	.00034	1	397	0.16
Sex & Ethnicity Interaction Test	2	3	.1467	. 1466	.00014	1	398	0.06
Siope Differences for Sex	7	8	. 1437	. 1434	.00128	1	401	0.13
Intercept Differences for Sex	8	9	.1434	. 0683	.07507	1	402	35.23 **
Slope Differences for Ethnicity	10	11	.0694	.0684	.00095	1	401	0.41
Intercept Differences for Ethnicity	11	12	.0684	. 0683	.00008	1	402	0.04
Biology I - 11 1985 - 198	36 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 1843	. 1843	.00000	1	147	0.00
Intercept Differences for Sex	8	9	. 1843	.0536	.13066	1	148	23.71 **
Biology I - II 1984 - 19	85 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.3062	. 2986	.00762	1	195	2.14
Intercept Differences for Sex	8	9	. 2986	. 1890	.10962	1	196	30.63 **
Biology I - II 1984 -	1985 Senio	r (Ethnicity =	White &	Black) (Sex m	ot tested)			
Slope Differences for Ethnicity	10	<b>1</b> 1	.2/79	.2,73	.00061	1	176	0.15
Intercept Differences for Ethnicity	11	12	.27 <i>7</i> 3	. 876	.08971	1	177	21.97 **
Chemistry I - 11 1984 - 198	5 Sophonior	e (Ethnicity	not testa	ed)				
Slope Differences for Sex	7	8	. 1260	. 1063	.01976	1	168	3.80
Intercept Differences for Sex	3	9	.1063	.0457	.06062	1	169	11.45 *
Chemistry 1 - 11 1984 - 1	985 Junior	(Ethnicity n	ot testes	<b>1</b> 5				
Slope Differences for Sex	7	В	.0935	.0896	.00388	1	426	1.82
Intercept Differences for Sex	8	9	.0896	.0200	.06957	1	427	32.63 *
Chemistry ( - 11 1984 -	1985 Junio	a (Ethnicity =	White &					
Slupe Differences for Ethnicity	19	11	.0211	.0201	.00105	1	426	0.46
Intercept Differences for Ethnicity	11	12	.0201	.0200	.00005	1	427	0.02

Table 0-10. (Continued)

	Cor	mparison		R <sup>2</sup>				
F-Test Comparison	Fuli	Restricted	Full	Restricted	ƙ <sup>2</sup> Change	df1	dfz	F
Chemistry I - II 1984 - 198	5 Senior	(Ethnicity n	ot tested	)				
Slope Differences for Sex	7	8	.0848	.0846	.00023	1	156	0.04
Intercept Differences for Sex	8	9	.0846	.0801	.00451	1	157	0.77
Chemistry I - II 1984 - 19	85 Senio	r (Ethnicity =	White &	Nonwhite) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.0955	.0802	.01526	1	156	2.63
Intercept Differences for Ethnicity	11	12	.0803	.0801	.00019	1	157	0.03
Government & Civics 1984 - 19	85 Fresh	men (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.1141	.1133	.00086	1	344	0.33
Intercept Differences for Sex	8	9	.1133	.0733	.03998	1	345	15.56 **
Government & Civics 1985 - 197	o \$ophoπ	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.0614	.0510	.01045	1	417	4.64
Intercept Differences for Sex	8	9	.0510	. 0106	.04041	1	418	17.80 *
Government & Civics 1985 - 19	86 Sopho	more (Ethnicit	y = White	& Hispanic)	(Sex net to	ested)		
Stope Differences for Ethnicity	10	11	.0514	.0514	.00000	1	388	0.00
Intercept Differences for Ethnicity	11	12	.0514	.0105	.04089	1	389	16.77 **
Government & Civics 1984 - 19	85 Junio	or (Ethnicity	not teste	·d)				
Slope Differences for Sex	7	8	. 1339	.1284	. 20545	1	456	2.87
Intercept Differences for Sex	8	9	.1284	. 0555	.07294	1	457	38.24 *
Government & Civics 1984 - 1	985 Juni	or (Ethnicity	= White 8	Nonwhite) (S	ex not tes	ted)		
Slope Differences for Ethnicity	10	11	.0793	.0778	.00148	1	456	0.73
Intercept Differences for Ethnicity	11	12	.0778	.0555	.02237	1	457	11.09 *
Government & Civics 198	15 - 1986	Junior (Ethn	iicity = W	/hite & Black)	ı			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1111	. 1169	.00017	1	707	0.14
Sex & Ethnicity Interaction Test	2	3	.1109	.1107	.00021	1	708	0.17
Slope Differences for Sex	7	8	.1102	.0916	.01863	1	711	14.89 *
Slope Differences for Ethnicity	10	11	.0349	.0322	.00268	1	711	1.98
Intercept Differences for Ethnicity	11	12	.0322	.0278	.00441	1	712	3.25
Government & Civics 19	84 - 1985	Senior (Ethr	nicity = 1	thite & Black;	•			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1142	. 1135	.00071	1	605	0.48
Sex & Ethnicity Interaction Test	2	3	.1135	.1104	.00311	1	603	2.11
Slope Differences for Sex	7	8	.1095	. 1087	.00083	1	606	0.56
Intercept Differences for Sex	8	9	.1087		.04579	1	607	31.18 *
Slope Differences for Ethnicity	10	11	.0629	.0629	.00001	1	606	0.00
Intercept Differences for Ethnicity	11	12	.0529	.0629	.00002	1	607	0.01

Table 0.10. (Continued)

	Com	parison		R <sup>2</sup>				-
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
History 1984 - 1985	Freshmen	(Ethnicity	= White,	Black & Hispar	nic)		<del></del>	<del></del>
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1683	. 1658	.00227	2	1,319	1.80
Sex & Ethnicity Interaction Test	5	3	.1658	.1628	.00301	2	1,321	2.39
Slope Differences for Sex	7	8	.1599	.1576	.00229	1	1,327	3.61
Intercept Differences for Sex	8	9	.1576	.0831	.07448	1	1,328	117.41 **
Slope Differences for Ethnicity	10	11	.0891	.0862	.00285	2	1,325	2.07
Intercept Differences for Ethnicity	11	12	.0862	.0831	.00316	2	1,327	2.29
History 1985 - 1986	5 freshmen	(Ethnicity	= Wnite &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1099	.1078	.00215	1	1,344	3.24
Sex & Ethnicity Interaction Test	2	3	.1104	.1102	.00016	1	1,344	0.24
Slope Differences for Sex	7	8	.1055	.1016	.00392	1	1,347	5.90
Intercept Differences for Sex	8	9	.1016	.0653	.03630	1	1,348	54.45 **
Slope Differences for Ethnicity	10	11	.0730	.0729	.00012	1	1,347	0.17
Intercept Differences for Ethnicity	11	12	.0729	.0653	.00767	1	1,348	11.15 **
History 1984 - 1989	Sophomor	e (Elhnicity	= White	& Black)				
3-way Interaction Test (ASVAL*sex*ethricity)	1	2	.1312	<b>.1</b> 281	.00313	1	1,431	5.16
Sex & Ethnicity Interaction Test	2	3	.1306	.1297	.00094	1	1,431	1.55
Slope Differences for Sex	7	8	.1226	.1199	.00273	1	1,434	4.46
Intercept Differences for Sux	8	9	.1199	-0629	.05695	1	1,435	92.85 **
Slope Differences for Ethnicity	10	11	.0775	.0772	.00025	1	1,434	0.38
Intercept Differences for Ethnicity	11	12	.0772	.0629	.01431	1	1,435	22.26 **
History 1985 - 198	S Sophonor	e (Ethnicity	= White,	Black & Hisp	anic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1479	.1415	.00639	5	1,666	5.49 *
Sex & Ethnicity Interaction Test	2	3	.1473	.1425	.00485	2	1,467	4.18
Slope Differences for Sex	7	8	.1266	. 1189	.00770	1	1,473	12.98 **
Slope Differences for Ethnicity	10	11	.0748	.0740	.00076	2	1,471	0.60
Intercept Differences for Ethnicity	11	12	.0740	.0434	.03059	2	1,473	24,33 **
History 1984 - 1	985 Junior	(Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.::53	. 1634	.00190	1	1,102	2.51
Sex & Ethnicity Interaction Test	2	3	. 1634	. 1630	.00037	1	1,103	0.48
Slope Differences for Sex	7	8	.1503	. 1409	.00738	1	1,106	12.21 **
Slope Differences for Ethnicity	10	11	.0878	.0875	.00036	1	1,106	0.44
Intercept Differences for Ethnicity	11	12	.0875	.0578	.02970	1	1,107	36.03 **
History 1985 - 1986 Ju	nior (Eth	inicity not te	ested)					
Slope Differences for Sex	7	8	. 1196	.1096	.01004	1	428	4.88
Intercept Differences for Sex	8	9	.1096	.0274	.08216	1	429	39.58 **
History 1985 - 1986	Junior (f	thocolty = Wh	ite & Bla	ick) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.0507	.0482	.00244	1	409	1.05
Intercept Differences for Ethnicity	11	12	.0482	.0257	.02255	1	410	9.71 *

Table D-10. (Continued)

	Con	nparisen	1	R <sup>2</sup>			_	
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
History 1984 - 1985 Ser	nior (Eth	nnicity not te	sted)					
Slope Differences for Sex	7	8	.2079	.1960	.01194	i	423	6.36
Intercept Differences for Sex	8	9	.1960	. 1342	.06179	1	424	32.58 •
History 1984 - 1985	Senior (E	Ethnicity = Wh	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	. 1905	.1890	.00146	1	402	0.72
Intercept Differences for Ethnicity	11	12	.1890	. 1396	.04938	1	403	24.54 *
Foreign Language 1984 - 1985	Freshmen	n (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.1068	.1046	.00221	1	1,012	2.51
Intercept Differences for Sex	8	ç	.1046	.0315	.07307	1	1,013	82.66 *
Foreign Language 1984 - 1985 Fr	eshmen (	Ethnicity = Wh	ite. Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.0339	.0334	.00045	2	1,010	0.23
Intercept Differences for Ethnicity	11	12	.0334	.0315	.00195	2	1,612	1.02
,					,2	-	.,	
Foreign Language 1985 - 1986	Freshmen	r (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.0769	.0655	.01140	1	797	9.84 *
foreign Language 1985 - 1985 Fr	eshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.0210	.0154	.00562	2	795	2.28
Intercept Differences for Ethnicity	!1	12	.0154	.0115	.00386	2	797	1.56
Foreign Language 1984 - 1985	Sophomer	e (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.1082	.0934	.01484	1	892	14.84 *
foreign Language 1984 - 1985 Sc	phomore -	(Etnnicity = W	hite, Bla	ck & Hispanic	(Sex not	teste	ci)	
Slope Differences for Ethnicity	10	11	.0134	.0064	.00698	2	890	3.15
Intercept Differences for Ethnicity	11	12	.0064	.0055	.00093	2	892	0.42
Foreign Language 1985	1986 Soj	phomore (Ethn	icity = W	hite & Nonwhi	tc)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0906	.0895	.00116	1	604	0.77
Sex & Ethnicity Interaction Test	2	3	.0895	.0890	.00048	1	605	0.32
Slope Differences for Sex	7	8	.0862	.0789	.00733	1	608	4.88
Intercept Differences for Sex	8	9	.0789	.0098	.06909	1	609	45.68 *
Slope Differences for Ethnicity	10	11	.0154	.0098	.00560	1	608	3.46
	11	12	.0098	.0098	.00002	1	609	0.02
Intercept Differences for Ethnicity								
·		(Ethnicity n	ot tested	()				
Foreign Language 1985 - 198					,00047	1	247	0.13
Foreign Language 1985 - 198 Stope Differences for Sex	36 Junior	(Ethnicity n 8 9	ot tested .1135 .1130	.1130 .0331	.00047 .07992	1	247 249	0.13 22. <b>3</b> 5 *
Foreign Language 1985 - 198 Slope Differences for Sex Intercept Differences for Sex	36 Junior 7 8	8 9	.1135 .1130	.1130 .0331	.07992	1		
Intercept Differences for Ethnicity  Foreign Language 1985 - 198  Stope Differences for Sex  Intercept Differences for Sex  Foreign Language 1985 - 198  Stope Differences for Ethnicity	36 Junior 7 8	8 9	.1135 .1130	.1130 .0331	.07992	1		0.13 22.35 *

Table D-10. (Continued)

	Cor	mparison		4 <sub>2</sub>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Foreign Language 1984 - 1	985 Senior	(Ethnicity n	ot tested	<b>)</b>				
Slope Differences for Sex	7	8	.0647	.0645	.00021	1	224	0.05
Intercept Differences for Sex	8	9	.0645	.0321	.03246	1	225	7.81 *
Foreign Language 1984 •	1985 Senio	r (Ethnicity =	White & 1	Hispanic) (Se	x ort teste	ed)		
Slope Differences for Ethnicity	10	11	.0193	.0098	.00947	1	185	1.79
Intercept Differences for Ethnicity	11	12	.0098	.0095	.00035	1	186	0.07
Typing & Word Processing 1984	- 1985 Fre	shmen (Ethnic	ity not to	ested)				
Slope Differences for Sex	7	8	.1401	.1298	.01037	1	507	6.12
Intercept Differences for Sex	8	9	. 1298	.0929	.03688	1	508	21.53 **
Typing & Word Processing 19o	4 - 1985 F	roshmen (Ethni	city = Wn	ite, Black &	Hispanic) (	(Sex no	t teste	d)
Slope Differences for Ethnicity	10	11	.0984	.0975	.00092	2	505	0.26
Intercept Differences for Ethnicity	11	12	. 0975	.0929	.00458	2	507	1.29
Typing & Word Processing 1985	- 1986 Fre	shmen (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.0855	.0855	.00004	1	492	0.02
Intercept Differences for Sex	8	9	. 0855	.0418	.04370	1	493	23.56 *
Typing & Word Processing 198	5 - 1986 F	reshmen (Ethni	city = Wh	ite & Hispani	c)(Sex ;	teste	ed)	
Slope Differences for Ethnicity	10	11	.0415	.0358	.00563	;	445	2.62
Intercept Differences for Ethnicity	11	12	. 0358	.0353	.00053	1	445	0.25
Typing & Word Processing 1984 -	1985 Scoh	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.0832	.0796	.00363	1	<i>(</i> 31	2.50
Intercept Differences for Sex	8	9	.0796	. 0174	.06211	1	632	42.65 **
Typing & Word Processing 1984	- 1985 So	obomore (Ethni	c:iv = Wh	ite. B'ack &	Hispanic)	(Sex na	ot teste	d)
Slope Differences for Ethnicity	19	11	.0260	.0212	.00454	2	629	1.56
Intercept Differences for Ethnicity	11	12	.0212	.0174	00375	۷	631	1.21
Typing & Word Processing 1985 -	1986 Soph	omore (Ethnic	itv not f	ested)				
Slope Differences for Sex	7	8	.0975	.0707	.03659.	i	405	12.02 *
Typing & Word Processing 1985	• 1986 So	ohomore (Etrsi	cirv = Wh	ite & Black)	sex not to	estedi		
Slope Differences for Ethnicity	10	11	.0474	.0474	.00003	1	374	0.01
Intercept Differences for Ethnicity	11	12	.0474	.0394	. ÜU799	1	375	3.15
Typing & Word Processing 1984	. 1025	nios (Fthnic)	ty not to	stod)				
Slope Differences for Sex	7	8	.1248	.1193	.00547	:	-1	2.44
Intercept Differences for Sex	8	9	. 1193	.0175	.10187	1	2	45.32 *
Typing & Word Processing 19	.0/ . 10sc	lungar di Abrilia	, p., . The ∶	es Constants o	50v = + 5:	ج اس ر		
							750	2.40
Stope Differences for Ethnicity	10	1î	.0209	.0207	.00026	1	359	0.10
Intercept Differences for Ethnicity	11	12	.0207	.6206	.00001	1	<b>3</b> 60	1 02

Table D-10. (Continued)

	Con	nparison		R <sup>2</sup>				
F-Test Comparison	Fracc	Restri ed	Full	Restricted	R <sup>2</sup> Change	df 1	uf2	F
Typing & Word Processing 1985	- 1966 Jur	nior (Ethnici	ty not te	s*ed)		<del></del>		
Slope Differences for Sex	7	8	.0877	.0785	.00914	1	221	2.22
Intercept Differences for Sex	8	9	.0786	.0214	.05718	1	222	13.70 **
Typing & Word Processing 1989	5-1986 Jur	nior (Ethnicit	y = Wnite	& Nonwhita)	Sex not te	ested)		
Slope Differences for Ethnicity	10	11	.0690	.0562	.01285	i	221	3.05
Intercept Differences for Ethnicity	11	12	.0552	.0214	.03478	1	222	8.18*
Typing & Word Processing 1984	- 1985 Sa.	nor (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.0546	. 38	.03080	1	د رن	0.18
Intercept Differences for Sex	8	9	.0538	.0183	.03544	1	217	8. iu :
Accounting/Bookkerping 1985 -	1986 Sophi	omore (Ethnia	ity not t	ested)				
Slope Differences for Sex	7	8	.1294	. 1035	.02573	1	311	9.19 *
Home Euonomics 984 - 1985	Freshmen	(Ethnicity r	ot tested	)				
Slope Differences for Sex	7	8	. 1578	.1576	.00024	1	547	0.15
Intercept Differences for Sex	δ	9	. 1576	.0671	. 09049	1	548	58.86 **
Home Economics 1984-1985	Freshmen	(Ethnicity =	White & 6	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.1517	.1517	.00000	1	519	0.00
Intercept Differences for Ethnicity	11	12	. 1517	.0602	. 09145	1	\$20	56.06**
Home Economics (985 ≥ 1986	Freshmen	(Ethnicity r	ot tested	)				
Slope Differences for Sex	7	8	.1700	.1633	.00666	1	312	2.50
Intercept Differences for Sex	8	9	. 1633	.0367	.12659	1	313	47.35 **
Home Economics 1985 - 1986	Frestimen	(Ethnicity =	White &	Nonwr.:te) (Sc	k not test	ed)		
Slope Differences for Ethnicity	10	11	.0157	. 1533	00238	1	312	0.79
Intercept differences for Ethnicity	11	12	.0533	.036?	.01657	1	313	5.48
Ноте ⊆. почытся 1984 - 1285	Sophomore	e (Elbnicity	nt teste	d)				
Slope Differences for Sex	7	8	.1287	.12:.7	. აზიივ	1	321	0.01
Intercept Differences for Sex	8	9	. 1287	.03-4	.09433	1	322	34.36 **
Home Economics 1984-1985	Sophomore	(Ethn t/=	White & M	lonwhite) (Sex	not testa	d)		
Slope Differences for Ethnicity	10	1	.0959	.0922	. 00პია	1	321	1.30
Intercept Differences for Ethnicity	11	12	.0922	.0344	.05787	1	322	20.53**
Home Economics 1985 - 1986	Sephomer	e (Ethnicity	n t teste	·d)				
Slope Differences for Sex	7	8	.1123	.1116	.00065	1	394	0.3%
Intercept Differences for Sex	8	9	.1116	.0207	.09091	1	395	40.42 *
Home Economics 1985:1936	Suphomore	(Ethnicity =	White & A	lonwhite) (Sex	not teste	ď)		
Slope Differences for Exhairity	10	11	.0357	.0285	.00725	;	394	2.96
Intercept Differences for Echnicity	11	12	.0285	.020′	.00776	1	395	3.15

Table D-10. (Continued)

	Co	Comparison		R <sup>2</sup>				
-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfi	df2	ř
Home Economics 1984 -	1985 Senior	(Ethnicity no	tested)				<del>_</del> _	<del></del>
Slope Differences for Sex	7	3	.0946	.0942	.00041	1	318	0.14
Intersept Differences for Sex	8	9	.0942	.0179	.07637	1	319	26.89 **
Home Economics 1984-	1985 Senior	(Ethnicity = W	nite & Noi	nwhite) (Sex	not tested)			
Slope Differences for Ethnicity	10	11	.0220	.0214	.00059	1	318	0.19
Intercept Differences for Ethnicity	11	12	.0214	.0179	.00349	1	319	1.14
Computer Programing 1984	- 1985 Juni	or (Ethnicity	not lest	ed)				
Slupe Differences for Sex	7	8	.1614	.1609	.00059	1	240	0.17
Intercept Differences for Sex	8	9	.1639	.0702	.09070	1	241	26.05 **
Computer Programming 1984	- 1985 Seni	or (Ethnicity	not lest	ed)				
Slope Differences for Sex	7	8	.0502	.0502	.00001	1	152	0.00
Intercept Differences for Sex	8	δ	.0502	.0474	.00283	1	153	0.46

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.

Table D-11. F-Tests of Significance for General Composite

	Comp	parison	1	R <sup>2</sup>				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
English I - IV 1984 - 198	 85 Frest	imen (Ethnic	ity = Whi	te, Black & H	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2725	.2718	.00073	2	2,422	1.21
Sex & Ethnicity Interaction Test	2	3	.2718	.2663	. 00550	2	2,424	9.15 **
Consistent Over or Under prediction of Subgroup	2	4	.2718	.2639	.00794	3	2,424	8.81 **
Slope Differences for Sex	2	5	.2718	. 2644	.00737	1	2,424	24.52 **
Slope Differences for Ethnicity	2	6	.2718	.2708	.00098	2	2,424	1.63
English I - IV 1985 - 198	B6 Frest	nmen (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way interaction Test (ASVAB*sex*ethnicity)	1	2	.2037	.2075	.00121	2	1,989	1.52
Sex & Ethnicity Interaction Test	5	3	. 2075	.2043	.00318	2	1,991	3.99
Slope Differences for Sex	7	8	.1966	.1938	.00276	1	1,997	6.85 *
Intercept hifferences for Sex	8	9	. 1938	.1520	.04185	1	1,998	103.71 **
Slope Differences for Ethnicity	10	11	. 1572	. 1538	.00337	2	1,995	3.99
Intercept Differences for Ethnicity	11	12	. 1538	. 1520	.00184	2	1,997	2.17
English I - IV 1984 - 1985	5 Sophor	nore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2942	.2939	.00031	2	2,296	0.51
Sex & Ethnicity Interaction Test	2	3	. 2939	.2922	.00169	2	2,298	2.76
Slope Differences for Sex	7	8	.2909	.2762	.01475	1	2,304	47.91 **
Stope Differences for Ethnicity	10	11	.2162	.2132	.00300	2	2,302	4.40
Intercept Differences for Ethnicity	11	12	.2132	.2127	.00048	2	2,304	0.70
£nglis≒ 1 - IV 1985 - 1986	6 Saphor	nore (Ethnic	itv = Whi	te. Black & H	ispanic)			
3-way Interaction Test (ASVAB*se,*ethnicity)	1	2	.2415	.2414	.00017	2	1,942	0.22
Sex & Ethnicity Interaction Test	2	3	.2414	. 2405	.00083	2	1,944	1.67
Slope Differences for Sex	7	8	. 2365	.2254	.01110	1	1,950	28.36 **
Slope Differences for Ethnicity	10	11	. 1627	.1618	.00084	2	1,948	0.98
Intercept Differences for Ethnicity	11	12	. 1618	. 1549	.00688	2	1,950	8.00 **
English I - IV 1984 - 19	985 Jun	ior (Ethnici	tv = Wnit	e. Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2411	.2409	.00021	2	1,721	0.24
Sex & Ethnicity Interaction Test	2	3	.2409	.2406	.00026	2	1,723	0.29
Stope Differences for Sek	7	8	.2389	.2256	.01230	1	1,729	27.94 **
Slave Differences for Ethnicity	10	11	. 1324	.1323	.00010	2	1,727	0.10
Intercept hifferences for Ethnicity	11	12	. 1323	. 1297	.00268	2	1,729	2.67
English 1 - 1v 1985 - 10	286 Jun	ior (Ethnici	tv = Unit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2196	.2195	.00011	1	1,258	0.17
Sex & Ethnicity Interaction Test	2	 3	.2195	.2195	.00002	1	1,259	0.03
Slope Differences for Sex	7	8	.2191	.2067	.01236	1	1,262	19.97 **
Slope Differences for Ethnicity	10	11	. 1043	. 1033	.00103	1	1,262	1,45
Inter of Diffic ences for Ethnicity	11	12	. 1033	. 1033	.00001	1	1,263	0.02
English 1 · ;√ 1984 · 10	985 Seri	ior (Ethnici	ty = Whit	c, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1934	.1912	.00216	2	1,275	1.71
Sex & Ethnicity Interaction Test	2	3	. 1912	.1904	.00083	2	1,277	0.66
Slope Differences for Sex	i. 7	8	. 1851	.1779	.00724	1	1,283	11.39 **
		C					1,203	11.37 ""
Slope Differences for Ethnicity	10	11	. 1385	. 135 <b>3</b>	.00317	2	1,281	2.36

Table 0-11. (Continued)

	Co	mparison		<sub>8</sub> 2				
f-Test Comparison	Full	Pestricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
General Math 1984 - 1	1985 Fres	hmen (Ethnicit	y = Whit	e, Black & Hi	spanic)		<del></del>	
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1054	.1052	.00013	2	1,167	0.08
Sex & Ethnicity Interaction Test	2	3	.1052	.1017	.00353	2	1,169	2.31
Slope Differences for Sex	7	8	. 098ა	.0985	.00012	1	1,175	0.16
Intercept Differences for Sex	8	9	.0985	.0890	.00952	1	1,176	12.41 **
Slope Differences for Ethnicity	10	11	.0927	.0920	.00076	2	1,173	0.49
Intercept Differences for Ethnicity	11	12	.0919	.0890	.00295	2	1,175	1.91
General Math 1985 - 1	1986 Fres	hmen (Ethnicit	y = Whit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0433	.0433	.00006	1	549	0.03
Sex & Ethnicity Interaction Test	2	3	.0433	.0405	.00280	1	550	1.61
Slope Differences for Sex	7	8	.0364	.0359	.00051	1	553	0.29
Intercept Differences for Sex	8	9	.0359	.0289	.00699	1	554	4.02
Slope Differences for Ethnicity	<b>i</b> 0	11	.0329	.0303	.00265	1	553	1.52
Intersept Differences for Ethnicity	11	12	.0303	.0289	.00135	1	554	0.77
General Math 1984 -	1985 Soph	omore (Ethnici	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1269	.1229	.00408	2	736	1.72
Sex & Ethricity Interaction Test	2	3	.1229	.1182	.00465	2	738	1.96
Slope Difterences for Sex	7	8	.1000	.0957	.00430	1	744	3.56
Intercept Differences for Sex	8	9	.0957	.0915	.00419	1	745	3.45
Slope Difterences for Ethnicity	10	11	.1108	.1033	.00747	2	742	3.12
Intercept Differences for Ethnicity	11	12	. 1033	.0915	.01175	2	744	4.88 *
u Haral Math 1903	1986 Soph	am (Sthrici	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1211	183	.00274	1	305	0.95
Sex & Ethnicity Interaction Test	2	3	.1184	.1166	.00180	1	306	0.62
Slope Differences for Sex	7	8	.1053	.1050	.00024	1	309	0.08
Intercept Differences for Sex	8	9	.1050	.0664	.03864	1	310	13.38 **
Scope Differences for Ethnicity	10	11	.3774	.0772	.00017	1	309	0.06
Intercept Differences for Ethnicity	11	12	.0772	.0041	<u> </u>	1	310	3.64
General Math 1984 -	1985 Jur	ior (Ethnicity	/ = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0708	.0698	.00094	1	266	0.27
Sex & Ethnicity Interaction Test	2	3	.0698	.0698	.00000	1	267	0.00
Slope Differences for Sex	7	8	.0664	.0659	.90047	1	270	0.13
intercept Differences for Sex	8	9	.0659	.0354	.03057	1	271	8.87 *
Slape Differences for Ethnicity	10	1:	.0384	.0380	.00034	1	270	0.09
Intercept Differences for Ethnicity	11	12	.0380	.0354	.00267	1	271	0.75
General Math 1985 - 1986	Junior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1386	.1357	.00290	1	222	0.75
Intercept Differences for Sex	8	9	.1357	.0767	.03907	1	223	10.08 *
General Math 1985 - 198	ó Ju∩ιor	(Ethnicity = ⊍i	nite & Pl	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1323	.1274	.00494	1	195	1.11
Intercept Differences for Ethnicity	11	12	.1274	. 1266	, , , , , ,	•	.,,	

Table 0-11, (Continued)

	C 04	mparison						
F-Test Comparison	rett	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Math 1984 - 1985	Senior	(Ethnicity not	tested)					
Slope Differences for Sex	7	8	.0899	.0851	.00480	j	230	1.21
Intercept Differences for Sex	8	9	.0851	.0834	.00171	1	231	0.43
General Math 1984 - 198	5 Senior	(Ethnicity = 1	White & B	lack) (Sex not	t tested)			
Slope Differences for Ethnicity	10	11	.1185	.1185	.00005	1	203	0.01
Intercept Differences for Ethnicity	11	12	.1185	.0964	.02206	1	204	5.11
Algebra 1984 - 1985	Freshme	n (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2038	.1985	.00532	1	1, 180	7.88 *
Sex & Ethnicity Interaction Test	2	3	.1985	. 1984	.00008	1	1,181	0.12
Stope Differences for Sex	7	8	.1931	.1878	.00527	1	1, 184	7.74 *
Intercept Differences for Sex	5	9	.1878	.1343	.05350	1	1,185	78.06 *
Slope Differences for Ethnicity	10	11	.1455	.1388	.00673	í	1,184	9.32 *
Intercept Differences for Ethnicity	11	12	.1388	.1343	.00453	1	1,185	6.23
Algebra 1985 - 1986	Freshme	n (Ethn aity	= White C	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2032	.2030	.00019	1	708	C.17
Sex & Ethnicity Interaction Test	2	3	.2030	.2018	.00120	1	709	1.06
Slope Differences for Sex	7	8	. 1983	.1968	.00155	1	712	1.38
Intercept Differences for Sex	8	9	.1968	.1428	.05400	1	713	₹7.93 <b>*</b>
Slope Differences for Ethnicity	10	11	.1465	.1461	.00039	1	712	0.32
Intercept Differences for Ethnicity	11	12	.1461	.1428	.00336	1	713	2.81
Algebra 1984 - 1985	Saphomo	re (Ethnicity	= White.	& Wonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1428	. 1426	.00015	1	871	0.15
Sex & Euplicity Interaction Test	2	3	.1426	. 1348	.00788	1	872	8.01 *
Slope Differences for Sex	7	8	.1329	.1235	.00940	1	875	9.49 *
intercept Differences for Sex	8	9	.1235	.0909	.03259	1	876	32.57 *
Siope Differences for Ethnicity	10	11	.0921	.0920	.60011	1	875	0.10
Intercept Differences for Ethnicity	11	12	.0920	.0909	.00103	1	876	0.99
Algebra 1985 - 1986	Sophoro	re (Ethnicity	= White	å Norwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1319	,1315	.00038	1	617	0.27
Sex & Ethnicity Interaction Test	2	3	.1315	. 1293	.00226	1	618	1.61
Slope Differences for Sex	7	8	.1254	.1223	.00309	1	621	2.19
Intercept Differences for Sex	, 8	9	.1223	. 1001	.02219	1	622	15.72 *
Slope Differences for Ethnicity	10	11	.1026	. 1022	.00046	1	621	0.32
Intercept Differences for Ethnicity	11	12	.1022	. 1001	.00208	1	622	1.44
Aigebra 1984 - 19	985 Junio	r (Ethnicity	= White &	Black				
3-way interaction Test (ASVAB*sex*ethnicity)	1	2	.1764	.1757	.00066	1	489	0.39
Sex & Ethnicity Interaction Test	2	3	.1757	. 1746	.00170	1	490	1.01
Slope Differences for Sex	7	8	. 1574	. 1537	.00372	1	493	2.17
Intercept Differences for Sex	8	9	.1574	. 1097	.04401	1	494	25.69 *
·								
Stope differences for Ethnicity	10	11	.1214	. 1132	.00823	1	493	4.52

Table D-11. (Continued)

		Co	mparisen		R <sup>2</sup>	<del></del>	· · -		
Test Comparison		Fuli	Restricted	Full	Restricted	R <sup>2</sup> Change	dfη	વાર	F
	Algebra 1985 - 1986	Junior (Et	hnicity not te	sted)			<del></del>		
Slope Differences for	Sex	7	8	.1505	.1349	.01565	1	273	5.03
Intercept Differences	for Sex	8	۶	. 1349	.1151	.01980	1	274	6.27
	Algebra 1985 - 198	36 Junior (Et	hnicity = Whit	e & Nonwh	ite) (Sex not	tested)			
Stope Differences for	Ethnicity	10	11	.1200	.1166	.00336	1	273	1.04
Intercept Differences	for Ethnicity	11	12	.1166	.1151	.00155	1	274	0.48
	Algebra 1984 - 1985	Senior (Et	hnicity not te	<ted)< td=""><td></td><td></td><td></td><td></td><td></td></ted)<>					
Slope Differences for	Sex	7	8	.1230	.1087	.01431	1	265	4.32
Intercept Differences	for Sex	8	9	. 1087	.0597	.04892	1	266	14.60 **
	Algebra 1984 - 198	35 Senior (Et	hnicity = Whit	e & Nonwh	ite) (Sex not	tested)			
Slope Differences for	Ethnicity	10	11	.0817	.0636	.01805	1	265	5.21
Intercept Differences	for Ethnicity	11	12	.0636	.0597	.00389	1	266	1.1;
	Geometry 1985 - 1986	i Freshmen (	Ethnicity not	tested)					
Slope Differences for	•	7	8	. 2336	. 2336	.00004	1	511	0.03
Intercept Differences		8	ç	. 2336	.2188	.01475	1	512	9.85 *
<u> </u>	eometry 1985 - 1986 Fr	eshmen (Ethu	icity = White	Black &	Hispanic) (Se	. not test	nd)		
Slope Differences for		10	11	.2232	.2193	.00391	2	509	1.28
Intercept Differences		11	12	.2193	.2188	.00048	2	511	0.16
	Geometry 1984 - 1985	Sepiromore (	Ethnicity not	tested)					
Slope Differences for		7	8	.2155	. 2155	.00001	1	561	0.01
Intercept Differences		8	9	.2155	. 1950	.02051	1	562	14.69 **
G	eometry 1984 - 1985 Sc	anhamare (Eth	nicity = Unite	Rlack &	Hispanica (S	or not test	tod)		
Slope Differences for		10	11	.2062	.1983	.00793	2	559	2.79
Intercept Differences	•	11	12	.1983	. 1950	.00328	2	561	1.15
	Geometry 1985 - 1986	Sochonore /	Ethnicity sot	tostod)					
Slope Differences for		7 Sopholicite (	8	.2521	.2511	.00101	1	410	0.55
Intercept Differences		ε	ç	.2511	.2110	.04006	1	411	21.98 **
	Cacinot 1085 10	194 Fachura	/Fab-i-ia	115.A. C 0	Marka (Cau -a				
Stope Differences for	Geometry 1985 - 19	oo sophonore 10	11	.2443	.2228	.0215 <u>3</u>	1	771	10.57.
stope birrelences for	Contents	10	11	.2443	.7776	.0713	'	371	10.57 *
	Geometry 1984 - 198							_	_
Stope Differences for		7	8	.2097	.2035	.00614	1	305	2.37
Intercept Differences	tor Sex	8	Ģ	. 2035	. 1616	.04197	1	306	16.13 *
	Geometry 1984 - 19		thnicity = Whi	te å Nonw	ahite) (Sex no	t tested)			
Slope Differences for	•	10	11	. 1681	. 1665	.00158	1	305	0.58
Intercept Differences	for Ethnicity	11	12	. 1665	. 1616	.00497	1	<b>3</b> 06	1.83

Table D-11. (Continued)

	Co	mpar ison		R <sup>2</sup>				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	đfj	afz	F
Geometry 1985 - 1986 Jun	ior (E	thricity not to	ested)	<del></del>			·	
Slope Differences for Sex	7	8	. 2063	.2057	.00065	1	123	0.10
Intercept Differences for Sex	8	ç	.2057	. 1754	.03028	1	124	4.73
Geometry 1985 - 1986 du	nior (E	thricity = Whi	ta & Norw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	. 2842	. 2401	.04410	1	123	7.58 •
Geometry 1984 - 1935 Sen	ior (f	thnicity not t	ested)					
Slope Differences for Sex	7	8	. 2065	. 2061	.00037	1	107	C.05
Intercept Differences for Sex	5	9	. 2061	.2060	,00005	1	108	0.01
Geometry 1984 - 1985 Se	mer (E	thricity = Whi	te & Nonw	hite) (Sex bo	t tested)			
Slepe Differences for Ethnicity	16	11	. 2206	.2189	.00176	1	107	0.24
Intercept Differences for Ethnicity	11	12	. 2189	.2060	.01284	1	108	1.77
Calculus 1985 - 1986 Jun	10r (E	thnicity not t	ested)					
Stope Differences for Sex	7	8	.0721	.0652	.00685	;	147	1.08
Intercept Differences for Sex	8	Ģ	. 0652	. 0651	.00012	1	1-8	0.02
General Science 1984 - 1	985 Fre	eshmen (Ethnic	ity = Whi	te, Black & H	(spanic)			
3-way Interaction Test (ASVAR*sex*ethnicity)	1	2	. 2880	. 2852	60274	2	1,956	3.76
Sex & Ethnicity Interaction Test	2	3	. 2852	.2778	. 00739	2	1,958	10.12 **
Consistent Over or Under prediction of Subgroup	2	4	. 2852	.2832	.00205	3	1,958	1.87
General Science 1985 - 1986	freshmo	n (Ethnicity	noc teste	d)				
Stope Differences for Sex	7	8	. 1376	. 1375	.00001	1	274	0.00
intercept Difforences for Sex	8	9	. 1375	. 1287	.00884	1	275	2.82
General Science 1985 - 198	6 Frest	nmen (Ethnicity	= White	å Black) (Sex	nut teste	d)		
Slope Differences for Ethnicity	10	17	. 1512	. 1293	.02190	1	240	6.19
Intercept Differences for Ethnicity	11	12	. 1293	. 1292	.00014	1	241	0.04
General Science 1984 - 1	985 Sup	лопоге (Ethni	city = Wn	ite & Nonwhit	c)			
3-way Interaction Test (ASVAB*sex*etnnicity)	1	2	. 2843	.2838	.00049	1	341	0.23
Sex & Ethnicity Interaction Test	2	3	. 2839	. 2697	.01416	1	342	6.76 *
Slope Differences for Sex	7	8	. 2426	.2378	.00476	1	345	2.17
Intercept Differences for Sex	8	9	.2378	. 1950	.04281	1	346	19.44 **
Slope Differences for Ethnicity	10	11	. 2362	.2183	.01188	1	345	5.32
Intercept Differences for Ethnicity	11	12	.2183	. 1950	.02333	1	346	10.33 *
General Science 1985 - 1986 S	ophone:	re (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.1781	.1781	.00004	1	183	0.01
Intercept Differences for Sex	8	9	. 1781	.1495	.02849	1	4	6.38
General Science 1985 - 1986	Sophor	ero (Ethorcity	= White	å Black) (\$c≻	not tests	۵)		
Slope Differences for Ethnicity	10	11	. 1996	. 1978	.00172	1	158	0.34
Intercept Differences for Ethnicity	11	12	. 1978	.1-3-	.02548	1	159	ら.05

	Ço	mparison		<sub>2</sub> 2				
F-Test Comparison	řull	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
General Science 1984 - 1985	Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1008	.0794	.02144	1	174	4.15
Intercept Differences for Sex	8	9	.0794	.0543	.02508	1	175	4.77
General Science 1984 - 19	85 Juni	or (Ethnicity	= White &	Black) (Sex	not tested)	)		
Slope Differences for Ethnicity	10	11	.1303	. 1288	.00153	1	149	0.26
Intercept Differences for Ethnicity	11	12	.1288	.0668	.06197	1	150	10.67 *
General Science 1935 - 1986	Junior	(Eibnicity no	t tested)					
Slope Differences for Sex	7	8	.2250	.2250	.00000	1	258	0.00
Intercept Differences to Sex	8	9	.2249	.2042	.02074	1	259	6.93 *
General Science 1985 - 1986	Junier	(Ethnicity = 1	⊌hite & N	onwhite)(Sex	not tested	i)		
Slope Differences for Ethnicity	10	11	.210/	.2043	.00623	1	258	2.04
Intercept Differences for Ethnicity	11	12	.2043	.2042	.00013	1	259	0.04
General Science 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1111	.1110	.00017	1	182	0.04
Intercept Differences for Sex	8	9	. 1110	.0832	.02774	1	183	5.71
Eiology I - II 1984 - 1985 F	reshmer	(Ethnicity n	ot tested	<b>)</b>				
Slow Differences for Sex	7	8	.2489	.2478	.00109	1	299	0.44
Intercept Differences for Sex	8	9	.2478	.2228	.02502	1	300	9.98 +
Biology i - 11 1984 - 1985	Freshmo	n (Ethnicity =	White &	Nonwhite) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.2269	.2228	.00410	1	299	1.58
Intercept Differences for Ethnicity	11	12	.2228	.2228	.00003	1	300	0.01
Biology I - II 1985 - 1	1986 Fre	shmen (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1893	.1889	.00032	1	1,120	0.45
Sex & Ethnicity Interaction Test	2	3	. 1891	. 1891	.00000	1	1,120	0.00
Slope Differences for Sex	7	8	.1881	.1879	.00016	1	1,123	۰.23
Intercept Differences for Sex	8	9	.1879	.1512	.03669	1	1,124	50.78 *
Slope Differences for Ethnicity	10	11	.1521	. 1520	.00010	1	1,123	0.13
Intercept Differences for Ethnicity	11	12	.1520	.1512	.00084	1	1,124	1.12
Biology 1 - 11 1984 - 19	85 Sopt	omore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	?	.2772	.2771	.00003	?	1,371	0.03
Sex & Ethnicity Interaction Test	2	3	.2772	. 2695	.00769	2	1,373	7.30 *
Consistent Over or Under prediction of Subgroup	2	4	.2772	.2592	.01792	3	1,373	11.35 *
Stope Differences for Sex	2	5	.2772	. 2595	.01763	1	1,373	33.50 *
Slope Differences for Ethnicity	2	6	.2772	. 2765	.00069	2	1,373	0.65
£iology I - 11 1985 - 1986 5	Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	. 2445	. 2286	.01594	1	335	7.07 *
Biology I - 11 1985 - 1986 Sopt	rore (	Ethnicity = Wh	ite, Blac	k & hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	. 1642	.1604	.00383	2	333	0.76
Intercept Differences for Ethnicity	11	12	. 1604	.1583	.00203	2	335	0.40

Table 0-11. (Continued)

	Con	parison						
F-Test Comparison	full	Restricted	Fuil	Restricted	R <sup>2</sup> Change	af1	qt3	f
Biology 1 - 11 1984	- 1985 Jur	nior (Ethnici	ty = White	e & Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2678	.2675	.00025	1	397	0.16
Sex & Ethnicity Interaction Test	2	3	.2675	.2672	.00033	1	398	0.13
Stope Difterences for Sex	7	8	.2556	.2553	.00026	1	401	0.14
Intercept Differences for Sex	8	4	.2553	.2103	.04499	1	402	24 29 **
Slope Differences for Ethnicity	10	11	.2251	.2250	.00011	1	401	0.06
Intercept Differences for Ethnicity	11	12	.2250	.2103	.01462	1	402	7.59 *
Birlogy I - 11 1985 - 19	86 Junior	(Ethnicity no	t tusted)					
Slope Differences for Sex	7	3	.3803	. 3633	.01691	1	147	4.01
Intercept Differences for Sex	8	9	.3633	. 2987	.06468	1	148	15.04 **
Biology I - II 1984 - 19	85 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.3556	.3513	.00424	1	195	1.28
Intercept Differences for Sex	8	9	.3513	.3083	.04306	1	196	15.01 **
Biology 1 - II 1984 -	1985 Senic	r (Ethnicity =	White &	Black) (Sex no	ot tested)			
Slope Differences for Ethnicity	10	11	.3519	.3601	.00176	1	176	0.48
Intercept Differences for Ethnicity	11	12	.3602	.3242	.03593	1	177	9.94 *
Chemistry 1 - 11 1985 - 19	086 Freshme	n (Ethnicity	not teste	<b>a</b> )				
Stope Differences for Sex	7	В	.1839	. 1831	.0668	1	128	0.14
Intercept Differences for Sex	8	9	.1831	. 1429	.04021	1	129	6.35
Chemistry 1 - 11 1984 - 198	35 Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.1096	. 1058	.00376	1	168	71
Intercept Differences for Sex	8	9	.1058	.0681	.03775	1	169	1.13 *
Chemistry I - 11 1985 - 198	36 Sophumor	e (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	. 1364	.1279	.00845	1	430	4.4
Intercept Differences for Sex	8	ý	.1279	. 0695	.05845	1	431	28.8- **
Chemistry 1 - 11 1984 - 1	1985 Junior	(Ethnicity r	not tested	f)				
Slope Differences for Sex	7	8	.2022	. 2012	.00104	1	425	0.55
Intercept Differences for Sex	8	9	.2012	, 1272	.07395	1	427	39.53 **
Chemistry 1 - 11 1984 -	1985 Junio	r (Ethnicity :	: White &	Konwhite) (Se	x not test	ed)		
Slope Differences for Ethnicity	10	11	.1555	. 1478	.00765	1	426	3.86
Intercept Differences for Ethnicity	11	12	.1478	.1272	.02060	1	427	10.32 *
Chemistry I - I! 1985 -	1985 Junior	· (Ethnicity :	not tester	1)				
Slope Differences for Sex	7	8	.1677	. 1316	.00511	1	137	1.01
Intercept Differences for Sex	8	9	. 1616	. 0759	.08563	1	138	14.09 *
Chemistry I - II 1985 •	1086 June	or (Ethnicity)	= White P	Nonuhital (Sc	is not tout	ee(1)		
Slope Differences for Ethnicity	1966 Junio	11	.0948	.0936	.00124	1	137	0.19
•	11	12	.0936	.0759	.01764		138	2.69
Intercept Differences for Ethnicity	[1	12	.0736	.0/39	.01/04	1	100	6.07

<u>Table D-11</u>. (Continued)

	Cor	nparison	F	2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfj	ರf2	F
Chemistry I - II 1984 - 198	5 Senior	(Ethnicity n	t tested	<del></del>				
Slope Differences for Sex	7	8	.1987	. 1986	.00004	1	156	0.01
Intercept Differences for Sex	8	9	.1986	. 1939	.00470	1	157	0.92
Chemistry 1 - 11 1984 - 19	85 Senio	r (Ethnicity =	White & P	Nonwhite) (Se.	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.2339	.2059	.02801	1	156	5.70
Intercept Differences for Ethnicity	11	12	.2059	.1939	.01195	1	157	2.36
Physics I - II 1985 - 1986	Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1211	.1158	.00530	1	232	1.40
Intercept Differences for Sex	8	9	.1158	.0649	.05096	1	233	13.43 **
Physics 1 - 11 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1779	.1734	.00455	1	166	0.92
Intercept Differences for Sex	8	9	,1734	.0993	.07404	1	167	14.96 **
Government & Civics 1984 - 19	85 frach	men (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2637	.2605	.00318	1	344	1.49
Intercept Differences for Sex	8	9	.2605	.2483	.01223	1	345	5.71
Therefore of the ences for sex	0	<b>Y</b>	.2003	.2403	,01223	•	347	5.71
Government & Civics 1984 - 198			•	-				
Slope Differences for Sex	7	8	. 1723	.1547	.01759	i	155	3.29
Intercept Differences for Sex	8	9	.1547	.1160	.03867	1	156	7.14 *
Government & Civics 1985 - 198	6 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Transces for Sex	7	8	.1772	. 1614	.01579	1	417	8.00 *
Government & Civics 1985 - 19	86 Sopho	more (Ethnicit	y = White	& Hispanic)	(Sex not te	ested)		
Slope Differences for Ethnicity	10	11	.1518	. 1516	.00018	1	388	0.08
Intercept Differences for Ethnicity	11	12	. 1516	. 1327	.01890	1	389	8.67 *
Government & Civics 1984 - 19	85 Junio	r (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2593	.2522	.00718	1	456	4.42
Intercept Differences for Sex	8	9	.2521	.2182	.03391	1	457	20.72 **
Government & Civics 1984 - 1	985 Juni	or (Ethnicity	= White &	Nonwhite) (S	ex not tes	ted)		
Slope Differences for Ethnicity	10	11	.2223	.2217	.00057	1	456	0.33
Intercept Differences for Ethnicity	11	12	.2217	.2182	.00348	1	457	2.04
Government & Civics 198	5 - 1986	Junior (Ethn	icity = U	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2470	.2461	.00090	1	707	0.84
Sex & Ethnicity Interaction Test	2	3	.2461	.2449	.00121	1	708	1.14
Slope Differences for Sex	7	8	.2387	.2305	.00826	1	711	7.72 *
Intercept Differences for Sex	3	9	.2305	.1865	.04399	1	712	40.70 **
Slope Differer is for Ethnicity	10	11	.1912	. 1911	.00006	1	711	0.06
Intercept Differences for Ethnicity	11	12	.1911	.1865	.00460	1	712	4.05

Table D-11. (Continued)

	Co	mparison	1	R <sup>2</sup>				<del></del>
F-Test Comparison	Full	Restricted	Full	Pestricted	R <sup>2</sup> Change	df 1	df2	F
Government & Civics 198	4 - 1985	Senior (Ethn	icity = W	hite & Black)	·			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2560	.2560	.00002	1	602	0.02
Sex & Ethnicity Interaction Test	2	3	.2560	.2555	.00049	1	603	0.40
Slope Differences for Sex	7	8	.2450	.2450	.00000	1	606	0.00
Intercept Differences for Sex	8	9	.2450	.2221	.02293	1	607	18.44 **
Slope Differences for Ethnicity	10	11	. 2324	.2324	.00001	1	606	0.01
Intercept Differences for Ethnicity	11	12	. 2324	.2221	.01033	1	607	8.17 *
History 1984 - 1985	Freshme	n (Ethnicity	= White,	Black & Hispar	nic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2958	.2950	.00079	2	1,319	0.74
Sex & Ethnicity Interaction Test	2	3	.2950	.2916	.00344	2	1,321	3.22
Slope Differences for Sex	7	8	.2871	.2848	.00232	1	1,327	4.33
Intercept Differences for Sex	8	۶	. 2848	.2478	.03697	1	1,328	68.64 **
Slope Differences for Ethnicity	10	11	. 2556	.2505	.00510	2	1,325	4.54
Intercept Differences for Ethnicity	11	12	.2505	.2473	.00270	2	1,327	2.39
History 1985 - 1986	Freshme	n (Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2638	.2629	.00083	1	1,344	1.51
Sex & Ethincity Interaction Test	2	3	. 2638	.2636	.00023	1	1,344	0.42
Slope Differences for Sex	7	8	. 2632	.2618	.00132	1	1,347	2.42
Intercept Differences for Sex	8	9	.2618	.2470	.01484	1	1,348	27.10 **
Slope Differences for Ethnicity	10	11	.2473	.2471	.00023	i	1,347	0.42
Intercept Differences for Ethnicity	11	12	.2471	.2470	.00007	1	1,348	0.13
History 1984 - 1985	Sophomo	re (Ethnicity	= White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2759	.2744	.00151	1	1,431	2.98
Sex & Ethnicity Interaction Test	2	3	.2765	.2743	.00213	1	1,431	4.21
Slope Differences for Sex	7	8	.2735	.2724	.00105	1	1,434	2.08
Intercept Differences for Sex	8	9	.2724	.2445	.02791	1	1,435	55.04 **
Slope Differences for Ethnicity	10	11	. 2455	.2448	.00073	1	1,434	1.40
Intercept Differences for Ethnicity	11	12	.2448	. 2445	.09024	1	1,435	0.46
History 1985 - 1986	Suphomo	re (Ethnicity	= White,	Black & Misp	anic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2184	.2143	.00412	2	1,466	3.86
Sex & Ethnicity Interaction Test	2	3	.2188	.2132	.00562	2	1,467	5.28 *
Slope Differences for Sex	7	8	.2021	. 1982	.00385	1	1,473	7.12 *
Intercept Differences for Sex	8	9	. 1982	.1525	.04575	1	1,474	84.10 **
Slope Differences for Ethnicity	10	11	. 1663	. 1591	.00722	2	1,471	6.37 *
Intercept Differences for Ethnicity	11	12	. 1591	. 1525	.00661	2	1,473	5.79 *
History 1984 - 19	85 Junio	r (Ethnicity	= White £	Black)				
3-way Interaction Tert (ASVAB*sex*ethnicity)	1	2	.2944	.2943	.00011	1	1,102	0.17
Sex & Ethnicity Interaction Test	2	3	.2943	.2937	.00065	1	1,103	1.02
Slope Differences for Sex	7	8	.2926	.2895	.00314	1	1,103	4.91
Intercept Differences for Sex	8	9	.2895	.2409	.04862	1	1,100	75.75 **
Slope Differences for Ethnicity	10	11	.2425	.2425	.00003	1	1,106	0.05
Intercept Differences for Ethnicity	11	12	. 2425	.2407	.00163	1	1,108	2.39

Table D-11. (Continued)

	Con	mparison	- 1	<sub>R</sub> 2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfj	df2	F
History 1985 - 1986 Jun	ior (Eth	nicity not tes	sted)					
Slope Differences for Sex	7	8	.2372	.2221	.01511	1	428	8.48 *
History 1985 - 1986	Junior (6	Ethnicity = Whi	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	. 1690	. 1689	.00008	i	409	0.04
Intercept Differences for Ethnicity	11	12	. 1689	. 1664	.00244	1	410	1.21
History 1984 - 1985 Sen	ior (Eth	nnicity not tes	sted)					
Slope Differences for Sex	7	8	.3319	.3245	در،نن.	1	423	4.64
Intercept Differences for Sex	8	9	.3245	.3071	.01743	1	424	10.94 *
History 1984 - 1985	Senior (8	Ethnicity = Wh	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.3471	.3446	.00247	1	402	1.52
Intercept Differences for Ethnicity	11	12	.3446	.3243	.02033	1	403	12.50 **
foreign Language 1984 - 1985	Freshmer	n (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2709	. 2680	00287	1	1,012	3.98
Intercept Differences for Sex	8	9	.2680	.1969	.07108	1	1,013	98.37 **
Foreign Language 1984 - 1985 Fr	eshmen (i	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.2248	.2241	.00076	2	1,010	0.49
Intercept Differences for Ethnicity	11	12	.2241	. 1969	.02/13	2	1,012	17.69 **
Foreign Language 1985 - 1986	Freshmei	n (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.1959	.1887	.00721	1	<b>7</b> 97	7.14 *
Foreign Language 1985 - 1986 Fr	eshmen (i	Ethnicity = Wh	ite, Blac	k & Hispanic)	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.1469	. 1384	.00845	2	795	3.94
Intercept Differences for Ethnicity	11	12	. 1384	.1268	.01162	2	<b>7</b> 97	5.38 *
foreign Language 1984 - 1985	Suphonior	e (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.2216	.2175	.00407	1	892	4.66
Intercept Differences for Sex	8	9	.2175	.1138	.10370	1	893	118.35 **
Foreign Language 1984 - 1985 So	phomore	(Ethnicity = W	hite, Bla	ck & Hispanic	) (Sex not	teste	d)	
Slope Differences for Ethnicity	10	11	. 1379	.1300	.00790	2	890	4.08
Intercept Differences for Ethnicity	11	12	.1300	.1138	.01615	2	892	8.28 **
Foreign Language 1985 -	1986 So	phomore (Ethn	icity = W	hite & Nonwhi	te)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1839	. 1839	.00000	1	<b>6</b> 04	0.00
Sex & Ethnicity Interaction Test	2	3	.1838	.1838	.00008	1	605	0.06
Stope Differences for Sex	7	8	. 1658	.1621	.00362	1	608	2.64
Intercept Differences for Sex	8	9	.1621	.0878	.07435	1	609	54.04 **
Slope Differences for Ethnicity	10	11	.1656	.1049	.00069	1	608	0.47
Intercept Differences for Ethnicity	11	12	. 1049	.0878	.01709	1	609	11.62 **

Table D-11. (Continued)

	Can	mparison		R <sup>2</sup>		·		
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Foreign Language 1984 - 1	985 Junior	(Ethnicity no	t tested	)				
Stope Differences for Sex	7	8	.2132	.2131	.00014	1	480	0.08
Intercept Differences for Sex	8	9	.2131	.1088	. 10435	1	481	63.79 **
Foreign Language 1984 - 1985	Junior (Et	thnicity = Whit	e, Black	& Hispanic)	(Sex not te	ested)		
Slope Differences for Ethnicity	10	11	.1409	.1334	.00748	2	478	2.08
Intercept Differences for Ethnicity	11	12	. 1334	.1088	.02467	2	480	6.83 *
Foreign Language 1985 - 1	986 Junior	(Ethnicity no	ot tested	)				
Slope Differences for Sex	7	8	.2121	.2102	.00187	1	247	0.58
Intercept Differences for Sex	8	9	.2102	.1405	.06968	1	248	21.88 **
Foreign Language 1985 -	1986 Junio	r (Ethnicity =	₩hite &	Hispanic) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.1043	.0909	.01340	1	205	3.07
Intercept Differences for Ethnicity	11	12	.0909	.0866	.00430	1	206	0.98
Foreign Language 1984 - 1	985 Senior	(Ethnicity no	ot tested	)				
Slope Differences for Sex	7	8	. 1483	.1472	.00117	1	224	0.31
Intercept Differences for Sex	8	9	. 1471	.1178	.02937	1	225	7.75 •
Foreign Language 1984 -	1985 Senio	r (Ethnicity =	White &	Hispanic) (Se	x not teste	ed)		
Slope Differences for Ethnicity	10	11	.0629	.0620	.00093	1	185	0.18
Intercept Differences for Ethnicity	11	12	. 0620	.0562	.00579	1	186	1.15
Secretary & Office Education 1	985 - 1986	Junior (Ethnic	ity ≃ Wh	ite & Nonwhit	e) (Sex not	t testo	ed)	
Slope Differences for Ethnicity	10	11	.1212	.1212	.00001	1	215	0.00
Intercept Differences for Ethnicity	11	12	.1212	.1211	.00008	1	216	0.02
Secretary & Office Education 1	984 - 1985	Senior (Ethnic	city = Wh	ite & Nonwhit	e) (Sex not	t teste	ed)	
Slope Differences for Ethnicity	10	11	.1003	.0866	,01374	1	220	3.36
Intercept Differences for Ethnicity	11	12	.0866	.0772	.00937	1	221	2.27
Typing & Word Processing 1984	- 1985 Fre	shmen (Ethnici	ity not t	ested)				
Slope Differences for Sex	7	8	.2745	.2718	.00261	1	507	1.82
Intercept Differences for Sex	8	9	.2718	. 2476	.02422	1	508	16.90 **
Typing & Word Processing 198	4 - 1985 Fi	reshmen (E.hnid	ity = Wh	ite. Black &	Hispanic) (	(Sex no	ot teste	d)
Slope Differences for Ethnicity	10	11	.2576	.2493	.00821	2	505	2.79
Intercept Differences for Ethnicity	11	12	. 2493	. 2476	.00171	2	507	0.58
Typing & Word Processing 1985	- 1986 Free	shmen (Ethnici	ity not t	ested)				
Slupe Differences for Sex	7	8	1955	. 1930	.00249	1	492	1.52
Intercept Differences for Sex	8	9	. 1930	. 1567	.03633	1	493	22.20 **
Typing & Word Processing 198	5 - 1986 Fi	reshmen (Ethoir	tity = ⊌h	ite & Hispani	c) (Sex bot	t tosta	rd)	
Slope Differences for Ethnicity	10	11	. 1569	. 1565	.00042	1	.u) 445	0.22
Intercept Differences for Ethnicity	11	12	. 1565	.1504	.00616	1	446	3.26
e	.,			, 1704		•	4.40	5.20

	Con	mparison	1	R <sup>2</sup>				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Typing & Word Processing 1984 -	1985 Sopho	omore (Ethnic	ity not to	ested)		<del>-</del>		
Slope Differences for	7	8	.2104	.2066	د ت003ء	1	631	3.06
Intercept Differences for Sex	8	9	.2066	.1507	.05589	1	632	44.52 **
Typing & Word Processing 1984	- 1985 Sop	phomore (Ethnic	city = Wh	ite, Black &	Hispanic)	(Sex no	t teste	d;
Slope Differences for Ethnicity	10	11	.1583	.1529	.00543	2	629	2.03
Intercept Differences for Ethnicity	11	12	. 1529	. 1507	.00220	2	631	5.82
Typing & Word Processing 1985 -	1986 Sopho	omore (Ethnic	ily not to	ested)				
Slope Differences for Sex	7	8	.1586	.1450	01365	1	405	6.57
Intercept Differences for Sex	8	9	.1450	.1312	.01381	1	406	6.56
Typing & Word Processing 1985	- 1986 Soj	ohomore (Ethni	city = Wh	ite & Black)	(Sex not to	ested)		
Slope Differences for Ethnicity	10	11	.1278	.1277	.00010	1	.'4	0.04
Intercept Differences for Ethnicity	11	12	.1277	.1266	.00116	1	375	0.50
Typing & Word Processing 1984	- 1985 Jur	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.2318	.2289	.00289	1	391	1.47
Intercept Differences for Sex	8	9	.2289	. 1365	.09239	1	392	46.97 **
Typing & Word Processing 198	4 - 1985 .	Junior (Ethnic	ity = Whi	te & Black) (	Sex not te	sted)		
Slope Differences for Ethnicity	10	11	.1479	. 1473	.00059	1	359	0.25
Intercept Differences for Ethnicity	11	12	. 1473	. 1425	.00479	1	360	2.02
Typing & Word Processing 1985	- 1986 Jur	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	. 1621	.1518	.01031	1	221	2.72
Intercept Differences for Sex	8	<b>9</b>	.1518	.0991	.05276	1	222	13.81 **
Typing & Word Processing 198	5 - 1986 .	Junior (Ethnic	ity = Whi	te & Non⊮hite	) (Sex not	testeo	i)	
Slope Differences for Ethnicity	10	11	.1182	.1111	.00711	1	221	1.78
Intercept Differences for Ethnicity	11	12	.1111	.0991	.01201	1	222	3.00
Typing & Word Processing 1984	- 1985 Sei	nior (Ethnici	tv not te	sted)				
Slope Differences for Sex	7	8	.1968	.1907	.00618	1	216	1.66
Intercept Differences for Sex	8	9	. 1907	.1482	.04242	1	217	11.37 *
Accounting/Bookkeeping 1985 -	1986 Sophi	omore (Ethnic	ity not t	ested)				
Slope Differences for Sex	7 7	8	.2117	.2048	.00696	;	311	2.75
Intercept Differences for Sex	8	9	.2048	.1434	.06135	1	312	24.67 *
Accounting/Bookkeeping 1984 -	1985 Jun	ior (Ethnicit	v not tec	(ed)				
Slope Differences for Sex	7	υ (Εξίπητε γτ υ	.2836	.2787	.00496	1	239	1.66
Intercept Differences for Sex	8	9	.2787	.1572	.12147	1	240	40.41 *
Accounting/Bookkeeping 1985 -	1084 I.e.	ior (Ethnicit	y not tec	ted)				
Slope Differences for Sex	7	8 8	, not tes .1548	.1498	.00498	7	185	1.09
Intercept Differences for Sex	8	9	.1498	.0914	.05840	: 1	186	
intercept virial energy 101 3cx	0	,	. 1470	.0914	.02040	1	100	12.78 *1

Table D-11. (continued)

	( or	nparison		,2				
F-Test Companison	Fuil	Restricted	Fell	Restricted	Ω <sup>2</sup> change	df1	df2	F
Accounting/Bookkeeping 198	4 - 1985 Sen	ior (Ethnic)t	y not tes	ted)				
Slope Differences for Sex	7	8	.1805	.1799	.00065	1	247	0.20
Intercept Differences for Sex	8	ý	.1799	.1194	.06052	1	248	18.30 **
Mome Economics 1984 - 1	985 Freshmen	(Sthnieicy re	ot testej	<b>)</b>				
Slope Differences for Sex	7	8	. 2683	.2881	.00014	1	547	0.11
Intercept Collections for Sex	8	ç	.2881	.2413	.01684	1	548	36.06 **
Home Economics 1984-	98¢ Fresh∞on	(Ethnicity =	₩hite - 2	ecas (Sea no)	t tested)			
Slope Differences for Ethnicity	10	11		.c:51	.00153	1	519	1.12
Intercept Differences for Ethnicity	11	12	.: 5	.20M	.06146	1	520	44.70**
Home Economics 1985 - 1	986 Freshmen	(Ethnicity r	ot tes ··					
Slope Differences for Sex	7	8	.21	.2163	.00352	1	312	1.40
Intercept Differences for Sex	8	9	.2162	, t. 1%	08866.	1	313	27.27
Home Economics 1985-1	986 Freshmen	(Ethnicity =	White & N	onwhite) (Ser	not tested	i)		
Slope Differences for Ethnicity	10	11	. 1439	. 1453	.00057	1	312	0.21
Intercept Differences for Ethnicity	1;	12	. 1433	,1414	.00194	}	313	0.77
Home Economics 1984 - 1	985 Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	. 2101	.2096	.00046	1	321	0.19
Intercept Differences for Sex	8	9	. 2096	.1398	.07042	1	322	28.69 **
Home Economics 1984-19	985 Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not tested	<b>ታ</b> ን		
Slope Differences for Ethnicity	10	11	.1776	.1678	.00982	1	321	3.83
Intercept Differences for Ethnicity	11	12	678	. 1392	.02852	1	322	11.03*
Home Economics 1985 - 1	1986 \$ophomor	e (Ethnicity	not veste	d)				
Scope Differences for Sex	7	8	1995	1985 .	.00020	1	394	0.10
Intercopt Differences for Sex	8	9	. :985	.1266	.07169	1	395	35.32 **
Home Economics 1985-19	986 Sophomore	(Ethnicity =	White & H	ગત⊣hite) (Sex	not testu	<b>ರ</b> )		
Slope Differences for Ethnicity	10	11	. 1311	.1268	.00428	1	394	1,94
Intercept Differences for Ethnicity	11	12	. 1268	. 1266	.60022	1	305	0.10
Home Economics 1984 -	1985 Junior	(Ethnicity no	t test <b>ed</b> )					
Stope Differences for Sex	7	8	. 1639	. 1639	.00002	1	279	0.01
Intercept Differences for Sex	8	9	. 1639	. 1218	.04212	1	280	14.11 **
Home Economics 1984-	1985 Junior (	Ethnicity = Wh	iite & Non	white) (Sex n	ot tested)			
Slope Differences for Ethnicity	10	11	.1246	.1238	.00084	i	279	0.27
Intercept Differences for Ethnicity	11	12	. 1237	.1218	.00194	1	280	0.62
Home Economics 1985 -	1986 Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	. 2040	.2040	. 00000	1	358	0.00
Intercept Differences for Sex	8	9	.2040	.0656	. 13843	1	359	62,43 *1

Table 0-11. (Concluded)

	Co	mparison		R <sup>2</sup>				
f-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Home Economics 1985-	1986 Junior (	Ethnicity = Wh	ita & Noni	white) (Sex n	ot wear			
Slope Differences for Ethnicity	10	11	.0707	. 0683	7. •	1	358	0.94
Intercept Differences for Ethnicity	11	12	. 0683	.0656	.025°	1	359	1.04
Home Economics 1984 -	1985 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1568	.1568	.00001	1	318	0.00
Intercept Differences for Sex	8	9	. 1568	.0982	.05859	1	319	22.16 **
Home Economics 1984	-1985 Senior	(Ethnicity = W	nite & No	nwhite) (Sex	not tested)	•		
Slope Differences for Ethnicity	10	11	. 1003	.0990	.00126	1	318	0.45
Intercept Differences for Ethnicity	11	12	. 0990	.0982	.00079	1	319	0.28
Computer Programming 1985	- 1986 Sophom	ore (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2321	.2277	.00441	1	227	1.30
Intercept Differences for Sex	8	9	.2277	.1229	. 10479	1	228	30.93 **
Computer Programming 198	4 - 1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2669	.2668	.00002	1	240	0.01
Intercept Differences for Sex	8	9	.2668	.2142	.05261	1	241	17.29 **
Computer Programming 198	5 - 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.3239	.3234	.00045	1	157	0.10
Intercept Differences for Sex	8	9	.3234	.1835	,13995	1	158	32.68 **
Computer Programming 198	4 - 1985 Seni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	. 1535	. 1535	.00002	1	152	0.00
Intercept Differences for Sex	8	9	. 1535	. 1522	.00131	1	153	0.24

<sup>&</sup>quot; P < .01.

<sup>\*\*</sup> P < .001.

<u>Table D-12</u>. F-Tests of Significance for Subtest Composite

	Comp	erison		R <sup>2</sup>				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
English 1 - IV 1984 -	1985 Fresh	men (Ethnic	ity = Whi	te, 3lack & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2852	.2849	.00023	2	2,422	0.40
Sex & Ethnicity Interaction Test	2	3	.2849	.2786	.00630	2	2,424	10.68 **
Consistent Over or Under prediction of Subgrou	p 2	4	.2849	.2802	.00474	3	2,424	5.36 *
English I - IV 1985 -	1986 Fresh	men (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2290	.2282	.00075	2	1,989	0.97
Sex & Ethnicity Interaction Test	2	3	.2282	.2248	.00338	2	1,991	4.36
Slope Differences for Sex	7	8	.2121	.2116	.00052	1	1,997	1.32
Intercept Differences for Sex	8	9	.2116	.2025	.00915	1	1,998	23.19 **
Slope Differences for Ethnicity	10	11	.2121	.2074	.00474	2	1,995	6.00 *
Intercept Differences for Ethnicity	11	12	.2074	.2025	.00492	2	1,997	6.19 *
English I - IV 1984 -	1985 Suphor	ore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.3160	.3155	.00050	2	2,296	0.84
Sex & Ethnicity Interaction Test	2	3	.3155	.3138	.00175	2	2,298	2.94
Slope Differences for Sex	7	8	.3091	.3037	.00535	1	2,304	17.83 **
Slope Differences for Ethnicity	10	11	.2988	.2967	.00203	2	2,302	3.33
Intercept Differences for Ethnicity	11	12	.2967	. 2941	.00263	2	2,304	4.31
English I - IV 1985 -	1986 Saphor	ore (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2616	.2602	.00143	2	1,942	1.89
Sex & Ethnicity Interaction Test	2	3	.2601	.2584	.00172	2	1,944	2.26
Slope Differences for Sex	7	8	.2460	.2403	.00572	1	1,950	14.79 **
Slope Differences for Ethnicity	10	11	.2334	.2313	.00212	2	1,948	2.70
Intercept Differences for Ethnicity	11	12	.2313	.2211	.01020	2	1,950	12.94 **
English I · IV 1984	- 1985 Juni	or (Ethnici	ty = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2682	.2682	.00007	2	1,721	0.08
Sex & Ethnicity Interaction Test	2	3	. 2682	.2666	.00160	2	1,723	1.83
Slope Differences for Sex	7	8	.2602	.2543	.00594	1	1,729	13.89 **
Slope Differences for Ethnicity	10	11	.2449	.2432	.00168	2	1,727	1.92
Intercept Differences for Ethnicity	11	12	.2432	.2402	.00307	2	1,729	3.51
English 1 - IV 1985	- 1986 Juni	or (Ethnici	τy = Whit	e & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2382	.2379	.00035	1	1,258	0.58
Sex & Ethnicity Interaction Test	2	3	.2379	.2372	.00065	1	1,259	1.08
Slope Differences for Sex	7	8	.2351	.2280	.00716	1	1,262	11.82 **
Slope Differences for Ethnicity	10	11	.2115	.2115	.00002	1	1,262	0.03
Intercept Differences for Ethnicity	11	12	.2115	.2101	.00140	1	1,263	2.24
English I - 1V 1984	- 1985 Seni	or (Ethnici	ty = Whit	e, Black & ні	spanic)			
3-Way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2250	.2238	.00110	2	1,275	0.90
Sex & Ethnicity Interaction Test	2	3	.2238	.2230	.00088	2	1,277	0.72
Slope Differences for Sex	7	8	.2166	.2151	.00148	1	1,283	2.43
Intercept Differences for Sex	8	9	.2151	.2079	.00723	1	1,284	11.82 **
Slope Differences for Ethnicity	10	11	.2122	.2100	.00221	2	1,281	1.79
Intercept Differences for Ethnicity	11	12	.2100	.2079	.00216	2	1,283	1.75

Table D-12. (Continued)

	Сотр	parison	1	82				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
General Math 1984 - 1	985 Freshm	nen (Ethnicit	y = Whit	e, Black & Hi	spanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1365	. 1345	.00196	2	1,167	1.33
Sex & Ethnicity Interaction Test	2	3	. 1345	. 1316	.00295	2	1,169	1.99
Slope Differences for Sex	7	8	.1273	.1271	.00014	1	1,175	0.19
Intercept Differences for Sex	8	9	.1271	.1260	.00110	1	1,176	1.48
Slope Differences for Ethnicity	10	11	.1301	.1291	.00093	2	1,173	0.63
Intercept Differences for Ethnicity	11	12	. 1291	.1261	.00309	2	1,175	2.08
General Math 1985 - 1	1986 Freshm	nen (Ethnicit	y = Whit	e & Riack)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.0635	.0632	.00026	1	549	0.15
Sex & Ethnicity Interaction Test	2	3	.0632	.0594	.00376	1	550	2.21
Slope Differences for Sex	7	8	.0573	.0555	.00180	1	553	1.05
Intercept Differences for Sex	8	Ģ	.0556	.0534	.00211	1	554	1.24
Slope Differences for Ethnicity	10	11	.0556	.0538	.00175	1	553	1.03
Intercept Differences for Ethnicity	11	12	.0538	.0534	.00036	1	554	0.21
General Math 1984	1985 Sophor	юге (Ethnici	ty = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1639	.1565	.00742	2	736	3.27
Sex & Ethnicity Interaction Test	2	3	.1565	. 1532	.00325	2	738	1.42
Slope Differences for Sex	7	8	.1530	.1509	.00312	1	744	1.86
Intercept Differences for Sex	8	9	. 1509	.1509	.00000	1	745	0.00
Slope Differences for Ethnicity	10	11	.1513	.1510	.00023	2	742	0.10
Intercept Differences for Ethnicity	11	12	.1510	.1509	.00011	2	744	0.05
General Math 1985	1986 Sophor	more (Ethnici	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 1434	.1402	.003i2	1	305	1.11
Sex & Ethnicity Interaction Test	2	3	.1402	. 1359	.00436	1	306	1.55
Slope Differences for Sex	7	8	.1107	.1091	.00155	1	309	0.54
Intercept Differences for Sex	8	9	.1091	.0946	.01450	1	310	5.04
Slope Differences for Ethnicity	10	11	.1178	.1178	.00001	1	309	0.00
Intercept Differences for Ethnicity	11	12	.1178	.0946	.02316	1	310	8.14
Generai Math 1984 -	1985 Juni	or (Ethnicity	y = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.1221	. 1205	.00162	1	266	0.49
Sex & Ethnicity Interaction Test	2	3	.1205	.1205	.00001	1	267	0.00
Slope Differences for Sex	7	8	.1095	.1087	.00073	1	270	0.22
Intercept Differences for Sex	3	9	.1087	.0971	.01160	1	271	3.53
Slope Differences for Ethnicity	10	11	.1069	.1047	.00216	1	270	0.65
Intercept Differences for Ethnicity	11	12	.1047	.0971	.00761	1	271	2.30
General Math 1985 - 1986	Junior (	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.1490	.1477	.00122	1	222	0.32
Intercept Differences for Sex	8	9	.1478	. 1377	.01008	1	223	2.64
General Math 1985 - 198	6 Junior (	Ethnicity = U	nite & Al	ack) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.1826	,1819	.00072	1	195	0.17
mape principles for eximiting	, ,	• •				•	.,,	

Table 0-12. (Continued)

	Co	mparison		2				
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
General Math 1984 - 1985	Senior	(Ethnicity not	tested)		<del></del>			
Slope Differences for Sex	7	8	.1410	.1254	.01562	1	230	4.18
Intercept Differences for Sex	8	9	. 1254	.1239	.00151	1	231	0.40
General Math 1984 - 198	5 <b>Seni</b> or	(Ethnicity =	White & B	lack) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	. 1702	. 1694	.00088	1	203	0.21
Intercept Differences for Ethnicity	11	12	. 1694	.1472	.02221	1	204	5.46
Algebra 1984 - 1985	Freshme	n (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	;	2	. 2429	.2422	.00073	1	1,180	1.14
Sex & Ethnicity Interaction Test	2	3	. 2421	.2421	.00000	1	1,181	0.01
Slope Differences for Sex	7	8	. 2386	.2372	.00143	1	1,184	2.22
Intercept Differences for Sex	8	9	. 2372	.2305	.00673	1	1,185	10.46 *
Slope Differences for Ethnicity	10	11	.2350	.2305	.00445	1	1,184	6.89 •
Intercept Differences for Ethnicity	11	12	. 2305	.2305	.00005	1	1,185	0.07
Algebra 1985 - 1986	Freshme	n (Ethnicity	= White &	Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2474	.2474	.00000	1	708	00.0
Sex & Ethnicity Interaction lest	2	3	. 2474	.2448	.00254	1	709	2.39
Slope Differences for Sex	7	8	. 2295	.2295	.00000	1	712	0.00
Intercept Differences for Sex	8	9	. 2295	.2184	.01105	1	713	10.22 *
Slope Differences for Ethnicity	10	11	. 2316	.2293	.00236	1	712	2.19
Intercept Differences for Ethnicity	11	12	.2293	.2184	.01088	1	713	10.07 *
Algebra 1984 - 1985	Sophono	re (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2006	.2005	.00001	1	871	0.01
Sex & Ethnicity Interaction Test	2	3	.2005	. 1946	.00590	1	872	6.43
Slope Differences for Sex	7	8	. 1939	. 1901	.00376	1	875	4.08
Intercept Differences for Sex	8	9	. 1901	.1897	.00039	1	876	0.42
Slope Differences for Ethnicity	10	11	. 1905	. 1904	.00012	1	875	0.13
Intercept Differences for Ethnicity	11	12	. 1904	. 1897	.00062	1	876	0.67
Algebra 1985 - 1986	Sophomo	re (Ethnicity	= White	& Nonwhite)				
3-way interaction Test (ASVAB*sex*ethnicity)	1	2	.2150	.2138	.00129	1	617	1.01
Sex & Ethnicity Interaction Test	2	3	. 2138	.2107	.00301	1	618	2.37
Slope Differences for Sex	7	8	. 1973	.1940	.00325	1	621	2.52
Intercept Differences for Sex	8	9	. 1940	.1909	.00318	1	622	2.45
Slope Differences for Ethnicity	16	11	. 2023	. 1998	.00251	1	621	1.95
Intercept Differences for Ethnicity	11	12	. 1998	.1909	. J0891	1	622	6.93 *
Algebra 1984 - 19	85 Junio	or (Ethnicity	= White &	Black)				
З-нау Interaction Test (ACVAB* 2.*ethnicity)	1	2	. 2629	.2626	.00030	1	489	0.20
Sex & Ethnicity Interaction Test	2	3	.2626	.2603	.00224	1	490	1.49
Slope Differences for Sex	7	8	. 2568	- 2564	.00048	1	493	0.32
Intercept Differences for Sex	8	ý	. 2564	.2554	.00091	1	494	0.61
Slope Differences for Ethnicity	10	11	.2585	.2559	.00256	1	493	1.70
Intercept Differences for Ethnicity	11	12	.2559	.2554	.00049	1	494	0.33

Table D-12. (Continued)

		Co	mparison		ę <sup>2</sup>				
F-Test Comparison		Full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfj	df2	F
	Algebra 1985 - 1986	Junion (Et	hnicity not te	sted)					
Slope Differences for	Sex	7	8	.2156	.2061	.00951	1	273	3.31
Intercept Differences	for Sex	8	9	.2061	.2046	.00148	1	274	0.51
	Algebra 1985 - 1986	5 Junior (Et	hnicity = White	e & Norwh	ite) (Sex not	tested)			
Slope Differences for	Ethnicity	10	11	.2255	.2087	.01681	1	273	5.93
Intercept Differences	for Ethnicity	11	12	.2087	.2046	.00405	1	274	1.40
	Algebra 1984 - 1985	Senior (Et	hnicity not te	sted)					
Slope Differences for	Sex	7	8	.3008	. 2944	.00644	1	265	2.44
Intercept Differences	for Sex	8	9	. 2944	. 2814	.01295	1	266	4.88
	Algebra 1984 - 1985	5 Senior (Et	hnicity = Whit	e & Nonwh	ite) (Sex not	tes <b>ted)</b>			
Slope Differences for	Ethnicity	10	11	.2916	.2819	.00980	1	265	3.67
Intercept Differences	for Ethnicity	11	12	.2819	. 2814	.00043	1	266	0.16
	Geometry 1985 - 1986	Freshmen (	Ethnicity not	test <b>ed</b> )					
Slope Differences for		7	8	. 2939	. 2936	. ûûû <b>3</b> 3	1	511	0.24
Intercept Differences	for Sex	8	9	. 2936	.2922	.00134	1	512	0.97
Ge	eometry 1985 - 1986 Fro	eshmen (Ethn	icity = White.	Black &	Hispanic) (Sc	x not teste	2d)		
Slope Differences for		10	11	,3035	.2955	.00808	2	509	2.95
Intercept Differences	for Ethnicity	11	12	.2955	. 2922	.00323	2	511	1.17
	Geometry 1984 - 1985 :	Sophomore (	Ethnicity not	test <b>ed</b> )					
Slope Differences for	Sex	7	8	.2881	.2878	.00030	1	561	0.24
Intercept Differences	for Sex	8	9	.2878	.2820	.00577	1	562	4.55
Ģe	eometry 1984 - 1985 So	phomore (Eth	nicity = White	, Black &	Hispanic) (S	ex not tesi	ted)		
Slope Differences for		10	11	.2852	.2821	.00305	2	559	1,19
Intercept Differences	for Ethnicity	11	12	. 2822	.2821	.00010	2	561	0.04
	Geometry 1985 - 1986 :	Sophomore (	Ethnicity not	tested)					
Slope Differences for	•	7	8	.3134	.3132	.00017	1	410	0.10
Intercept Differences		8	9	.3132	.3010	.01215	1	411	7.27 *
	Geometry 1985 - 19	86 Sophomore	(Ethnicity =	White & B	lack) (Sex no	t tested)			
Slope Differences for		10	11	.3359	.3139	.02199	1	371	12.29 **
	Geometry 1984 - 198	5 Junior di	Chnicicy not t	ested)					
Slove Differences for		7	8	.2566	.2547	.00185	1	305	0.76
Intercept Differences		8	9	.2547	. 2338	.02087	1	306	8.57 *
	Geometry 1984 - 19	85 Junior (F	thnicit∨ = ⊌hi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for	•	10	11	.2359	.2340	.00190	1	305	0.76
Intercept Differences	·	11	12	.2340	.2338	.00015	1	306	0.06
i illiocpe billerenocs		• •	-			,00015	•	300	V.00

	Co	mparison		<sub>8</sub> 2				
F-Test Companison	Full	Restricted	full	Restricted	R <sup>2</sup> Change	df1	dfz	F
Geometry 1985 - 1986 Juni	or (F	thnicity not to	ested)					
Slope Differences for Sex	7	8	.3652	.3611	.00405	1	123	0.78
Intercept Differences for Sex	8	9	.3611	.3259	.03515	1	124	5.82
Geometry 1985 - 1986 Jun	ior (E	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	.4014	.3636	.03780	1	123	7.77 *
Geometry 1984 - 1985 Seni	or (E	thnicity not to	ested)					
Slope Differences for Sex	7	8	.3425	.3058	. 03664	1	107	5.96
Intercept Differences for Sex	8	9	.3058	.3038	.00198	1	108	0.31
Geometry 1984 - 1985 Sen	ior (8	thnicity = Whi	te & Nonw	hite) (Sex no	t tested)			
Slope Differences for Ethnicity	10	11	. 3246	.3122	.01231	1	167	1.95
Intercept Differences for Ethnicity	11	12	.3122	.3038	. 00839	1	108	1.32
Calculus 1985 - 1986 Juni	or (E	thnicity not t	ested)					
Slope Differences for Sex	7	8	. 2346	. 2339	.00071	1	147	0.14
Intercept Differences for Sex	8	9	.2339	.2316	.00226	1	148	0.44
General Science 1984 - 19	85 Fre	eshmen (Ethnic	ity = Whi	te, Black & H	ispanic)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.3023	.3006	.00175	2	1,956	2.46
Sex & Ethnicity Interaction Test	2	3	.3006	.2922	.00832	2	1,958	11.64 **
Consistent Over or Under prediction of Subgroup	2	4	.3006	.2992	.00132	3	1,958	1.23
General Science 1985 - 1986 F	neshm	en (Ethnicity:	not teste	d)				
Slope Differences for Sex	7	8	.1761	.1738	.00229	1	274	0.76
Intercept Differences for Sex	8	9	.1738	.1702	.00365	1	275	1.22
General Science 1985 - 1986	frest	nmen (Ethnicity	= White	& Black) (Sex	not testes	i)		
Slope Differences for Ethnicity	10	11	.1818	.1718	.01002	1	240	2.94
Intercept Differences for Ethnicity	11	12	. 1718	.1713	.00054	1	241	0.16
General Science 1984 - 19	85 <b>S</b> op	phomore (Ethni	city = Wh	ite & Nonwhit	c)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2831	. 2824	.00075	1	341	0.36
Sex & Ethnicity Interaction Test	2	3	.2824	.2671	.01528	1	342	7.28 *
Slope Differences for Sex	7	8	.2604	. 2546	.00379	1	345	1.77
Intercept Differences for Sex	8	9	.2566	. 2519	.00458	1	346	2.18
Slope Differences for Ethnicity	10	11	.2604	.2567	.00379	1	345	1.77
Intercept Differences for Ethnicity	11	12	.2567	. 2519	.00476	1	346	2.22
General Science 1985 - 1986 So	ρηοποι	re (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2384	. 2363	.00212	1	183	0.51
Intercept Differences for Sex	8	9	.2363	. 2192	.01715	1	184	4.13
General Science 1985 - 1986	Sophor	nore (Ethnicity	= White	& Black) (Sex	not teste	(t		
Slope Differences for Ethnicity	10	11	. 2535	. 2529	.00053	1	158	0.11

Table D-12. (Continued)

	Co	mparison	1	<sub>R</sub> 2				
F-lest Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	dis	F
General Science 1984 - 1985	Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1191	.1190	.00011	1	174	0.02
Intercept Differences for Sex	8	9	.1190	.1174	.00159	1	175	0.32
General Science 1984 - 1	1985 Juni	or (Ethnicity :	= White &	Black) (Sex	not tested	<b>;</b>		
Slope Differences for Ethnicity	10	11	.1947	. 1944	.00035	1	149	0.06
Intercept Differences for Ethnicity	11	12	. 1944	.1208	.07354	1	150	13.69 *1
General Science 1985 - 1986	Junior	(Ethnicity no	t tested)					
Stupe Differences for Sex	7	8	.2655	.2640	.00148	1	258	0.52
Intercept Differences for Sex	8	9	.2640	.2592	.00481	1	259	1.69
General Science 1985 - 198	36 Junior	(Ethnicity = 1	White & N	onwhite) (Sex	not tested	d)		
Slope Differences for Ethnicity	10	11	.2645	. 2595	.00495	1	258	1.74
Intercept Differences for Ethnicity	11	12	.2595	.2592	.00030	1	259	0.11
General Science 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.1456	. 1425	.00308	1	182	0.66
Intercept Differences for Sex	8	9	.1425	. 1165	.02600	1	183	5.55
Biology I - II 1984 - 1985	Freshiner	(Ethnicity n	ot tested	<b>)</b>				
Slope differences for Sex	7	8	.2733	.2729	.00041	1	299	0.17
Intercept Differences for Sex	8	9	.2729	. 2661	.00681	1	300	2.81
Biology 1 - i1 1984 · 1989	5 Freshme	en (Ethnicity =	White &	Nonwhite) (Sc	x not test	ed)		
Slope Differences for Ethnicity	10	11	.2721	.2661	.00596	1	299	2.45
Intercept Differences for Ethnicity	11	12	.2661	.2661	.00005	1	300	0.02
Biology 1 - 11 1985 -	1986 Fre	eshmen (Ethnic	ity = Whi	te & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2190	.2187	.00029	1	1,119	0.42
Sex & Ethnicity Interaction Test	2	3	.2187	.2186	.00010	1	1,120	0.14
Slope Differences for Sex	7	8	.2184	.2179	.00054	1	1,123	0.78
Intercept Differences for Sex	3	9	.2179	.2109	.00700	1	1,124	10.06 *
Slope Differences for Ethnicity	10	11	.2113	.2113	.00003	1	1,123	0.05
Intercept Differences for Ethnicity	11	12	.2113	.2109	.00035	1	1,124	0.50
Biology 1 - 11 1984 -	1985 Sopl	omore (Ethnic	ity = IJhi	te, Black & F	lispanic)			
J-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.3010	.3002	.00079	2	1,371	0.77
Sex & Ethnicity Interaction Test	2	3	.3002	. 2900	.01012	2	1,373	9.93 *
Consistent Over or Under prediction of Subgroup	p 2	4	. 3002	. 2925	.00764	3	1,373	4.99 *
Biology I - II 1985 - 1986		•						
Slope Differences for Sex	7	8	.2948	.2887	.00613	1	335	2.91
Intercept Differences for Sex	8	9	.2887	.2807	.00805	1	336	3.80
Biology 1 - 11 1985 - 1986 So	phomore (	(Ethnicity = Wh	ite, Blac	k & Hispanic;	(Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.2891	.2844	.00464	2	333	1.67
Intercept Differences for Ethr. city	11	12	. 2844	.2857	.00377	2	335	0.88

	Сопр	arison	R	2				
F-Test Comparison	Full 1	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Biology I - 11 1984 -	1985 Juni	or (Ethnicity	= White	& Nonwhite)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	. 2695	.2691	.00037	1	397	0.20
Sex & Ethnicity Interaction Test	2	3	. 2691	.2600	.00915	1	398	4.98
Slope Differences for Sex	7	8	. 2567	. 2524	.00434	1	401	2.34
Intercept Differences for Sex	8	9	. 2524	.2488	.00359	1	402	1.93
Slope Differences for Ethnicity	10	11	. 2521	.2470	.00310	1	401	1.66
Intercept Differences for Ethnicity	11	12	.2490	. 2488	.00018	1	402	0.09
Biology I - II 1985 - 1986	Juniar (	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.4877	.4648	.02289	1	147	6.57
Intercept Differences for Sex	8	9	.4648	.4624	.002/6	1	148	0.68
Biology I - II 1984 - 1985	Senior (	Ethnicity not	tested)					
Slope Differences for Sex	7	8	.3508	.3482	.00258	1	195	0.78
Intercept Differences for Sex	8	9	.3482	. 3324	.01577	1	196	4.74
Biology I - II 1984 - 19	85 Senior	(Ethnicity = W	hite & E	Black) (Sex no	ot tested)			
Slope Differences for Ethnicity	10	11	.3758	.3740	. 00177	1	176	0.50
Intercept Differences for Ethnicity	11	12	.3740	.3294	.04466	1	177	12.63 *
Chemistry I - II 1985 - 1986	Freshaeti	(Ethnicity m	it tester	i)				
Slope Differences for Sex	7	8	.3153	.3107	.00464	1	128	0.87
Intercept Differences for Sex	8	9	.3107	.3106	.00016	1	129	0.03
Chemistry 1 - 11 1984 - 1985	Sonhomore	(Ethnicity no	nt testad	1)				
Slope Differences for Sex	7	8	. 1366	.1365	.00015	1	168	0.03
Intercept Differences for Sex	8	9	. 1365	.1150	.02145	1	169	4.20
Chemistry I - II 1985 - 1986	Sanhamara	(Ethnicity no	of testor	47				
Slope Differences for Sex	7	8	.1857	.1851	.00051	1	430	0.27
Intercept Differences for Sex	8	9	. 1852	.1765	.00862	1	431	4.56
Chemistry 1 - 11 1984 - 198	S tunior	(Ethnicity no	nt tester	4)				
Slope Differences for Sex	7	8	. 2603	.2592	.00111	1	426	0.64
Intercept Differences for Sex	8	9	.2592	.2556	.00365	1	427	2.11
Chemistry ! - 1  1984 - 19	ne lunion	/Ethoinity = 1	lhita 2 I	Nonchital (Co	v <b>not to</b> st	ad <b>\</b>		
Slope Differences for Ethnicity	10	11	.2746	.2600	.01458	1	426	8.56
		ANTAB COLOR						
Chemistry 1 - 11 1985 - 198 Slope Differences for Sex	36 Junior /	(Ethnicity not 8	tested .2234	.2180	.00542	1	137	0.96
intercept Differences for Sex	8	9	.2180	. 2002	.01773	1	138	3.13
Chemistry I - II 1985 - 19	097. 1	(Ethnicity - 1	Jhita E	Non-hital /Ca	v not tock	ort)		
Slope Differences for Ethnicity	10	11	.2041	.2027	.00138	ea) 1	137	0.24
SING. DITTERCHES TOT CUMILLICA	10							

	Соп	parison		ξ2			<del></del>	
F-Test Comparison	Ful!	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
Chemistry I - II 1984 - 198	5 Senior	(Ehnicity no	t tested)					
Slope Differences for Sex	7	8	.3099	. 2974	.01247	1	156	2.82
Intercept Differences for Sex	8	9	.2974	.2958	.00154	1	157	0.34
Chemistry 1 - II 1984 - 19	85 Senior	(Ethnicity =	White & I	Nonwhite) (Se	k not teste	٠d)		
Slope Differences for Ethnicity	10	11	.3128	.2968	.01609	1	156	3.65
Intercept Differences for Ethnicity	11	12	. 2968	.2958	.00092	1	157	0.21
Physics I - 11 1985 - 1986	Junior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2066	. 1892	.01740	1	232	5.09
Intercept Differences for Sex	8	9	. 1892	.1827	.00655	1	233	1.88
Physics 1 - 11 1984 - 1985	Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2331	.2303	.00277	1	166	0.60
Intercept Differences for Sex	8	9	. 2303	.2268	.00357	1	167	0.78
Government & Civics 1984 - 19	985 Freshm	nen (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.3286	.3277	.00088	1	344	0.45
Intercept Differences for Sex	8	9	.3277	.3275	.00027	1	345	0.14
Government & Livies 1984 - 198	35 Saphoma	ore (Ethnicit	y not tes	τεα)				
Slope Differences for Sex	7	8	.2415	.2150	.02654	1	155	5.42
Intercept Differences for Sex	8	9	.2150	.2076	.00744	1	156	1.48
Government & Civics 1985 - 198	36 Sophomo	ore (Ethnicit	y not tes	ted)				
Stope Differences for Sex	7	8	.2355	.2262	.00937	1	417	5.11
Intercept Differences for Sex	8	9	. 2262	.2253	.00086	1	418	0.47
Government & Civics 1985 - 19	986 Sophor	more (Ethnicit	y = White	& Hispanic)	(Sex not to	sted)		
Slope Differences for Ethnicity	10	11	. 2638	.2638	.00000	1	388	0.00
Intercept Differences for Ethnicity	11	12	.2678	.2462	.01756	1	389	9.28
Government & Civics 1984 - 19	985 Junio	r (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.3054	.3027	.00270	1	456	1.77
Intercept Differences for Sex	8	9	.3027	.3014	.00131	1	457	0.86
Government & Civics 1984 - 1	1985 Junio	or (Ethnicity	= White &	Nonwhite) (S	ex not test	ed)		
Slope Differences for Ethnicity	10	11	.3072	.3063	.00085	1	456	0.56
Intercept Differences for Ethnicity	11	12	.3063	.3014	.00495	1	457	3.26
Government & Civics 198	35 - 1986	Junior (Ethn	icitv = W	hite & Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.3046	.3036	.00100	1	707	1.01
Sex & Ethnicity Interaction Test	2	3	.3036	.3036	.00001	1	708	0.01
Slope Differences for Sex	7	8	.3024	.3018	.00063	1	711	0.65
Intercept Differences for Sex	8	9	.3018	.2979	.00387	1	712	3.95
Slope Differences for Ethnicity	10	11	. 2993	.2980	.00125	1	711	1.27

Table D-12. (Continued)

F-Test Comparison  Government & Civics 1984 3-way Interaction Test (ASVAB*sex*ethnicity) Sex & Ethnicity Interaction Test	Full - 1985 1 2 7 8 10 11	Restricted  Senior (Ethn 2 3 8 9	.2853 .2852 .2817	Restricted hite & Black) .2852 .2852	.00003	df1	df2	F
3-way Interaction Test (ASVAB*sex*ethnicity)	1 2 7 8 10	2 3 8 9	.2853 .2852 .2817	.2852		1		
•	2 7 8 10	3 8 9	.2852 .2817			1		
Sex & Ethnicity Interaction Test	7 8 10	8	.2817	. 2852	00000		602	0.02
	8 10	9			.00000	1	603	0.00
Slope Differences for Sex	10			.2813	.00043	1	606	0.36
Intercept Differences for Sex		11	.2813	. 2789	.00238	1	607	2.01
Slore Differences for Ethnicity	11		.2832	.2831	.00003	1	606	0.03
Intercept Differences for Ethnicity		12	.2831	.2789	.00425	1	607	3.60
History 1984 - 1985 (	Freshmei	n (Ethnicity	= White, I	Black & Hispar	nic)			
3-way Inceraction Test (ASVAB*sex*ethnicity)	1	2	.3051	.3043	.00071	2	1,319	0.68
Sex & Ethnicity Interaction Test	2	3	.3043	.3013	.00306	2	1,321	2.90
Slope Differences for Sex	7	8	.2952	.2951	.00018	1	1,327	0.33
Intercept Differences for Sex	8	9	. 2951	.2829	.01214	1	1,328	22.88 **
Slope Differences for Ethnicity	10	11	. 2898	. 2836	.00622	2	1,325	5.81 *
Intercept Differences for Ethnicity	11	12	.2836	. 2829	.00065	2	1,327	0.60
History 1985 - 1986	Freshme	n (Ethnicity	= White &	Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.3028	.3027	.00004	1	1,343	0.08
Sex & Ethnicity Interaction Test	2	3	.3027	.3027	.00001	1	1,344	0.02
Slope Differences for Sex	7	8	.3007	.3006	.00011	1	1,347	0.21
Intercept Differences for Sex	8	9	.3006	.3005	.00002	1	1,348	0.03
Slope Differences for Ethnicity	10	11	.3026	.3007	.00189	1	1,347	3.64
Intercept Differences for Ethnicity	11	12	.3007	.3005	.00018	1	1,348	0.35
History 1984 - 1985	Sophomo	re (Ethnicity	/ = White	& Black)				
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.3093	.3083	.00104	1	1,430	2.15
Sex & Ethnicity Interaction Test	2	3	.3083	.3046	.00372	1	1,431	7.69 *
Slope Differences for Sex	7	8	.3025	.3025	.00001	1	1,434	0.01
Intercept Differences for Sex	8	9	.3025	.3016	.00084	1	1,435	1.73
Slope Differences for Ethnicity	10	11	.3035	.3023	.00024	1	1,434	U.49
Intercept Differences for Ethnicity	11	12	.3033	.3016	.00162	1	1,435	3.33
History 1985 - 1986	Saphomo	re (Ethnicity	/ = White,	Black & Hisp	ani <b>c)</b>			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2417	.2411	.00062	2	1,465	0.60
Sex & Ethnicity Interaction Test	2	3	.2411	.2338	.05727	2	1,467	7.03 **
Consistent Over or Under prediction of Subgroup	2	4	.2411	.2334	.00773	3	1,467	4.98 *
History 1984 - 198	5 Junio	r (Ethnicity	= White &	· Black)				
3-way Interaction Test (ASVAG*sex*ethnicity)	1	2	.3254	.3244	.00094	1	1,102	1.54
Sex & Ethnicity Interaction Test	2	3	.3244	.3217	.00276	1	1,103	4.50
Stope Differences for Sex	7	8	.3164	.3163	.00010	1	1,106	0.16
Intercept Differences for Sex	8	9	.3163	.3123	.00402	1	1,107	6.51
Slope Differences for Ethnicity	10	11	.3169	.3167	.00011	ì	1,106	0.17
Intercept Differences for Ethnicity	11	12	.3168	.3123	.00450	1	1,107	7.30 *
History 1985 - 1986 Juni	or (Ei	hnicity not to	Lsted)					
Stope Differences for Sex	7	8	.2717	. 2557	01606	1	428	9.44 *

Table D-12. (Continued)

	Co	mparison		2				
F-Test Comparison	Fult	Restricted	Full	Restricted	R <sup>2</sup> Change	df1	df2	F
History 1985 - 1986	Junior (	Ethnicity = Whi	ite & Blad	ck) (Sex not	tested)			• • •
Slope Differences for Ethnicity	10	11	.2582	.2561	.00216	1	409	1,19
Intercept Differences for Ethnicity	11	12	. 2561	.2492	. 00685	1	410	3.78
History 1984 - 1985 Ser	nior (E	thnicity not te	est <b>ed</b> )					
Slope Differences for Sex	7	8	.3837	.3819	.00181	1	423	1.24
Intercept Differences for Sex	8	9	.3819	. 3799	.00203	1	424	1.40
History 1984 - 1985	Senior (	Ethnicity = Whi	ite & Bla	ck) (Sex not	tested)			
Slope Differences for Ethnicity	10	11	.4153	.4137	.00154	1	402	1.06
Intercept Differences for Ethnicity	11	12	.4137	.3861	.02759	1	403	18.97 **
Foreign Language 1984 - 1989	5 Freshme	n (Ethnicity no	ot tested	)				
Slope Differences for Sex	7	8	.3263	.3263	.00006	1	1,012	0.09
Intercept Differences for Sex	8	9	<b>.3</b> 263	.3172	.00910	1	1,013	13.68 *
Foreign Language 1984 - 1985 F	reshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic;	) (Sex not	tested	)	
Slope Differences for Ethnicity	10	11	.3377	.3293	.00835	2	1,010	6.37 *
Foreign Language 1985 - 198	6 Freshme	n (Ethnicity)	not teste	d)				
Slope Differences for Sex	7	8	.2558	.2554	.00047	1	797	0.50
Intercept Differences for Sex	8	ý	. 2554	. 2491	.00622	1	798	6.66
Foreign Language 1985 - 1986 F	reshmen (	Ethnicity = Wh	ite, Blac	k & Hispanic	) (Sex not	tested	)	
Stope Differences for Ethnicity	10	11	.2552	. 2525	.00264	2	<b>79</b> 5	1.41
Intercept Differences for Ethnicity	11	12	.2525	.2491	.00338	2	777	1.80
Foreign Language 1984 - 1985	Sophomor	e (Ethnicity	not teste	d)				
Slope Differences for Sex	7	8	.2722	. 2721	.00009	1	892	0.11
Intercept Differences for Sex	8	9	. 2721	. 2585	.01360	1	893	16.58 *
Foreign Language 1984 - 1985 S	ophomore	(Ethnicity = W	hite, Bla	ck & Hispani	c) (Sex not	teste	<b>d</b> )	
Slope Differences for Ethnicity	10	11	.2655	. 2618	.00363	2	890	2.20
Intercept Differences for Ethnicity	11	12	.2618	. 2585	.003 <b>3</b> 2	2	892	2.01
Foreign Language 1985	- 1986 Se	ophomore (Ethn	icity = W	hite & Nonwh	ite)			
3-way Interaction Test (ASVAB*sex*ethnicity)	1	2	.2025	.2014	.00113	1	604	0.86
Sex & Ethnicity Interaction Test	2	3	.2014	. 2004	.00099	1	695	0.75
Stope Differences for Sex	7	8	.1977	. 1975	.00013	1	608	0.10
Intercept Differences for Sex	8	9	.1975	. 1814	.01617	1	607	12.27 *
Slope Differences for Ethnicity	10	11	.1870	. 1870	.00003	1	608	0.03
Intercept Differences for Ethnicity	11	12	.1870	. 1814	.00561	1	609	4.20
Foreign Language 1984 - 19	85 Junio	· (Ethnicity n	ot tested	1)				
Slope Differences for Sex	7	8	.2402	.2371	.00306	1	480	1.93
Intercept Differences for Sex	8	9	.2371	. 2116	.02557	1	481	16.12 *

Table D-12. (Continued)

Foreign Language 1984 - 1985 Junior (Ethnicity = White, Black & Hispanic) (Sex not tested)  Floreign Language 1985 - 1986 Junior (Ethnicity = White, Black & Hispanic) (Sex not tested)  Foreign Language 1985 - 1986 Junior (Ethnicity not tested)  Slope Differences for Sex 7 8 .2369 .2315 .00544 1 247 Intercept Differences for Sex 8 9 .2315 .00544 1 247 Intercept Differences for Sex 8 9 .2315 .00544 1 247 Intercept Differences for Sex 9 .2315 .00544 1 247 Intercept Differences for Sex 1 10 .00107 1 .00107	1.76 7.79 *
Stope Differences for Ethnicity	1.76 7.79 *
Foreign Language 1985 - 1986 Junior   (Ethnicity not tested)   Slope Differences for Sex   7	1.76 7.79 *
Slope Differences for Sex	7.79 *
Foreign Language 1985 - 1986 Junior (Ethnicity = White & Hispanic) (Sex not tested)	7.79 *
Foreign Language 1985 - 1986 Junior (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1751 .1531 .02197 1 205 Intercept Differences for Ethnicity 11 12 .1531 .1483 .00482 1 206  Foreign Language 1984 - 1985 Senior (Ethnicity not tested)  Slope Differences for Pax 7 8 .2239 .2205 .00343 1 224 Intercept Differences for Sex 8 9 .2205 .2137 .00675 1 225  Foreign Language 1984 - 1985 Senior (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1732 .1725 .00078 1 185 Intercept Differences for Ethnicity 11 12 .1725 .1692 .00324 1 186  Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Honwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2305 .2254 .60510 1 215 Intercept Differences for Ethnicity 11 12 .2254 .2254 .60050 1 216  Secretary & Office Education 1984 - 1985 Senior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 11 12 .1793 .1772 .00201 1 221  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .3074 .3071 .00030 1 507 Intercept Differences for Sex 7 8 .3074 .3071 .00030 1 507 Intercept Differences for Sex 8 9 .3071 .3053 .00184 1 508  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not tested)  Slope Differences for Sex 7 8 .3074 .3071 .00030 1 507 Intercept Differences for Sex 8 9 .3071 .3053 .00184 1 508	
Stope Differences for Ethnicity	_
Intercept Differences for Ethnicity	_
Foreign Language 1984 - 1985 Senior (Ethnicity not tested)  Slope Differences for Pex 7 8 .2239 .2205 .00343 1 224 Intercept Differences for Sex 8 9 .2205 .2137 .00675 1 .225  Foreign Language 1984 - 1985 Senior (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1732 .1725 .00078 1 185 Intercept Differences for Ethnicity 11 12 .1725 .1692 .00324 1 186  Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2305 .2254 .60510 1 .215 Intercept Differences for Ethnicity 11 12 .2254 .2254 .60005 1 .216  Secretary & Office Education 1984 - 1985 Senior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1820 .1792 .00277 1 .220 Intercept Differences for Ethnicity 11 12 .1793 .1772 .00201 1 .221  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .3074 .3071 .00030 1 .507 Intercept Differences for Sex 8 9 .3071 .3053 .00184 1 .508  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not test est test test test test est test .46	
Stope Differences for Tex   7 8 2239 2205 .00343 1 224	1.17
Intercept Differences for Sex	
Foreign Language 1984 - 1985 Senior (Ethnicity = White & Hispanic) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1732 .1725 .00078 1 185 Intercept Differences for Ethnicity 11 12 .1725 .1692 .00324 1 186  Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .2305 .2254 .60510 1 215 Intercept Differences for Ethnicity 11 12 .2254 .2254 .60095 1 216  Secretary & Office Education 1984 - 1985 Senior (Ethnicity = White & Nonwhite) (Sex not tested)  Slope Differences for Ethnicity 10 11 .1820 .1792 .00277 1 220 Intercept Differences for Ethnicity 11 12 .1793 .1772 .00201 1 221  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .3074 .3071 .00030 1 507 Intercept Differences for Sex 8 9 .3071 .3053 .00184 1 508  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not test ested)  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not test ested)  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not test ested)  Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity = White, Black & Hispanic) (Sex not test ested)	0.99
Stope Differences for Ethnicity   10	1.95
Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)	
Secretary & Office Education 1985 - 1986 Junior (Ethnicity = White & Nonwhite) (Sex not tested)	0.17
Slope Differences for Ethnicity   10	0.73
Slope Differences for Ethnicity	
Secretary & Office Education 1984 - 1985   Senior (Ethnicity = White & Nonwhite) (Sex not tested)	1.42
Slope Differences for Ethnicity	0.01
Slope Differences for Ethnicity	
Typing & Word Processing 1984 - 1985 Freshmen (Ethnicity not tested)  Slope Differences for Sex 7 8 .3074 .3071 .00030 1 507 Intercept Differences for Sex 8 9 .3071 .3053 .00184 1 508  Typing & Word Processing 1984 - 1985 Freshman (Ethnicity = White, Black & Hispanic) (Sex not test Slope Differences for Ethnicity 10 11 .3110 .3079 .00315 2 505	0.75
Slope Differences for Sex         7         8         .3074         .3071         .00030         1         507           Intercept Differences for Sex         8         9         .3071         .3053         .00184         1         508           Typing & Word Processing 1984 - 1985 Freshmc i (Ethnicity = White, Black & Hispanic) (Sex not test Slope Differences for Ethnicity         10         11         .3110         .3079         .00315         2         505	0.54
Intercept Differences for Sex 8 9 .3071 .3053 .00184 1 508  Typing & Word Processing 1984 - 1985 Freshmai (Ethnicity = White, Black & Hispanic) (Sex not test Slope Differences for Ethnicity 10 11 .3110 .3079 .00315 2 505	
Typing & Word Processing 1984 - 1985 Freshmai (Ethnicity = White, Black & Hispanic) (Sex not test Slope Differences for Ethnicity 10 11 .3110 .3079 .00315 2 505	0.22
Slope Differences for Ethnicity         10         11         .3110         .3079         .00315         2         505	1.35
	ed)
	1.15
Intercept Differences for Ethnicity 11 12 .3079 .3052 .00262 2 507	0.96
Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity not tested)	
Slope Differences for Sex 7 8 .2268 .2266 .00017 1 492	0.11
Intercept Differences for Sex 8 9 .2266 .2171 .00955 1 493	6.09
Typing & Word Processing 1985 - 1986 Freshmen (Ethnicity = White & Hispanic) (Sex not tested)	
Flope Differences for Ethnicity 10 11 .2334 .2275 .00589 1 445	3.42
Intercept Differences for Ethnicity 11 12 .2275 .2264 .00110 1 446	0.63
Typing & Word Processing 1984 - 1985 Suphomore (Ethnicity not tested)	
Stope Differences for Sex 7 8 .2572 .2571 .00005 1 631	0.04
Intercept Differences for Sex 8 9 .2571 .2551 .00207 1 632	1.76

	Co	mparison	, , , , , , , , , , , , , , , , , , ,					
F-Test Comparison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Typing & Word Processing 1984	- 1985 So	phomore (Ethnic	ity = Wh	ite, Black &	Hispanic)	(Sex riot	tested	1)
Slope Differences for Ethnicity	10	11	. 2564	.2559	.00050	2	629	0.21
Intercept Differences for Ethnicity	11	12	. 2559	.2551	.00086	2	631	0.37
Typing & Word Processing 1985 -	1986 Soph	omore (Ethnic	ity not to	ested)				
Slope Differences for Sex	7	8	. 2035	.2017	.00181	1	405	0.92
Intercept Differences for Sex	8	9	.2017	. 1983	-00342	1	406	1.74
Typing & Word Processing 1985 -	1986 Snph	omore (Ethnici	ty = White	e & Black) (S	ex not tes	teri)		
Slope Differences for Ethnicity	10	11	. 1921	. 1899	.00225	1	374	1.04
Intercept Differences for Ethnicity	11	12	. 1899	.1861	.00382	1	375	1.77
Typing & Word Processing 1984 -	1985 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.2533	.2532	.00012	1	391	0.06
Intercept Differences for Sex	8	9	.2532	.2440	-00921	1	392	4.84
Typing & Word Processing 1984 -	1985 Juni	or (Ethnicity :	= White &	Black) (Sex	not tested	)		
Slope Differences for Ethnicity	10	11	.2456	.2456	.00005	1	359	0.02
Intercept Differences for Ethnicity	11	12	.2456	.2454	.00015	1	360	0.07
Typing & Word Processing 1985	- 1986 Ju	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex		8	.1837	.1748	.00886	;	221	2.40
Intercept Differences for Sex	8	9	.1748	.1650	.00978	1	222	2.63
Typing & Word Processing 198	5-1986 Ju	nior (Ethnicit	y = White	& Wonwhite)	(Sex not t	ested)		
Slope Differences for Ethnicity	10	11	.1821	.1811	.00102	1	221	0.28
Intercept Differences for Ethnicity	11	12	.1811	.1650	.01606	1	555	4.35
Typing & Word Processing 1984	- 1985 Se	nior (Ethnici	ty not te	sted)				
Slope Differences for Sex	7	8	.2705	.2645	.00598	1	216	1.77
Intercept Differences for Sex	8	9	.2645	.2614	.00312	1	217	0.92
Accounting/Bookkeeping 1985 -	1986 Soph	omere (Ethnic	ity not t	ested)				
Slope Differences for Sex	7	8	.2264	.2257	. 00072	1	311	0.29
Intercept Differences for Sex	8	9	.2257	.2072	~ 343	1	312	7.43
Accounting/Bookkeeping 1984 -	1985 Jur	nior (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.3820	.3798	,00223	1	239	0.86
Intercept Differences for Sex	8	9	.3798	.3769	.00289	1	240	1.12
Accounting/Bookkeeping 1985 -	1986 Jur	nior (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2423	.2419	.00043	1	185	0.10
Intercept Differences for Sex	8	9	.2419	.2377	.00413	1	186	1.01
Accounting/Bookkeeping 1984 -	1985 Ser	nior (Ethnicit	y not tes	ted)				
Slope Differences for Sex	7	8	.2330	.2320	.00099	1	247	0.32
-				-				

Table D-12. (Continued)

		Con	nparison		<sub>4</sub> 2				
F-Test Comparison		full	Restricted	Full	Restricted	R <sup>2</sup> Change	dfi	df2	F
Home F	conomics 1984 - 1985	Freshmen (Et	thnicity not to	ested)		<u> </u>			
Slope Differences for	Sex	7	8	.3083	.3083	.00004	1	547	0.03
Intercept Differences	for Sex	8	9	.3083	.2870	.02127	1	548	16.85 **
	Home Economics 1984-	1985 Freshmen	(Ethnicity = 1	⊌hite & B	lack) (Sex not	tested)			
Slope Differences for	Ethnicity	10	11	.3266	.3265	.00013	1	519	G. 10
Intercept Differences	for Ethnicity	11	12	.3265	.2650	.06145	1	520	47.44**
нс	ome Economics 1985 -	1986 Freshmen	(Ethnicity n	ot test <b>ed</b>	)				
Slope Differences for	Sex	7	8	.2084	.2059	.00254	1	312	1.00
Intercept Differences	for Sex	8	9	.2059	.1640	.04182	1	313	16.48 **
	Home Economics 1985	1986 Freshmen	(Ethnicity = 1	White & N	onwhite) (Sex	not tested	<b>1</b> )		
Slope Differences for	Ethnicity	10	11	. 1696	.1667	.00287	1	312	1.08
Intercept Differences	for Ethnicity	11	12	.1667	.1640	.00266	1	313	1.00
He	ome Economics 1984 -	1985 Sophomore	e (Ethnicity)	not teste	d)				
Slope Differences for	Sex	. 7	8	.2219	.2219	.00002	1	321	0.01
Intercept Differences	for Sex	8	9	.2219	.2026	.01936	1	322	8.01 *
ŗ	Home Economics 1984	1985 Saphomaan	(Ethnicity = 1	White & N	onwhite) (Sax	not testes	d)		
Slope Differences for		10	11	.2535	.2402	.01328	1	321	5.71
Intercept Differences	•	11	12	.2402	.2026	.03762	1	322	15.94**
H	ome Economics 1985 -	1986 Saphomore	e (Ethnicity	not test	ed)				
Slope Differences for	Sex	. 7	8	.2086	.2085	.00005	1	394	9.02
Intercept Differences	for Sex	8	9	.2085	.1940	.01449	1	395	7.23 *
!	Home Economics 1985-	1986 Sophomore	(Ethnicity =	White & N	onwhite) (Sex	not tested	d)		
Slope Differences for	Ethnicity	10	11	.2052	. 1954	.00979	1	394	4.85
Intercept Differences	for Ethnicity	11	12	.1954	.1940	.00135	1	395	0.66
ı	Home Economics 1984	1905 Junior	(Ethnicity n	ot tested	)				
Slope Differences for	Sex	7	8	.2237	.2209	.00281	1	279	1.01
Intercept Differences	for Sex	8	9	.2209	.2207	.00622	1	290	0.08
	Home Economics 1934	-1985 Junior (I	Ethnicity = Wh	ite & Non	white) (Sex na	ot tested)			
Slope Differences for		10	11	.2267	.2264	.00033	1	279	0.12
Intercept Differences	for Ethnicity	11	12	.2264	.2207	.00571	1	280	2.07
(	Home Economics 1985	- 1986 Junior	(Ethnicity no	t tested)					
Slope Differences for		7	8	.2252	.2244	.00081	1	358	0.37
Intercept Diff=rences		8	9	.2244	.2031	.02128	1	359	9.85 *
intercept biriprences									
intercept biriprences	Home Economics 1985	-1986 Junior ()	Ethnicitv = ⊌h	ite & Non	white) (Sex no	ot tested)			
Slope Differences for	Home Economics 1985 Ethnicity	-1986 Junior (1 10	Ethnicity = Wh	ite & Non .2071	white) (Sex no. .2071	ot tested)	1	358	0.03

Table 0-12. (Concluded)

	Co	mparison	į	,2				
F-Test Companison	Full	Restricted	Full	Restricted	R <sup>2</sup> Change	df 1	df2	F
Home Economics 1984 -	1985 Senior	(Ethnicity no	t tested)					
Slope Differences for Sex	7	8	.2310	.2281	.00292	1	318	1.21
Intercept Differences for Sex	8	9	.2281	.2079	.02017	1	319	8.33 *
Home Economics 1984-	1985 Senior	(Ethnicity = W	nite & Nor	nuhite) (Sex :	not tested)	,		
Slope Differences for Ethnicity	10	11	.2128	.2033	.00452	1	318	1.83
Intercept Differences for Ethnicity	11	12	. 2083	.2079	.00036	1	319	0.14
Computer Programming 1985 -	1986 Sophom	ore (Ethnicit	y not test	ted)				
Slope Differences for Sex	7	8	.2984	. 2982	.00020	1	227	0.07
Intercept Differences for Sex	8	9	.2982	.2873	.01089	1	228	3.54
Computer Programming 1984	- 1985 Juni	or (Ethnicit	y not tes	ted)				
Stope Differences for Sex	7	8	.3410	.3405	.00053	1	240	0.19
Intercept Differences for Sex	8	9	.3405	.3319	.00857	1	241	3.13
Computer Programming 1985	- 1986 Juni	or (Ethnicity	not test	ed)				
Slope Differences for Sex	7	8	.4206	.4140	.00665	1	157	1.80
Intercept Differences for Sex	8	9	.4140	.3833	.03064	1	158	8.26 *
Computer Programming 1984	- 1985 Seni	or (Ethnicity	not teste	ed)				
Slope Differences for Sex	7	8	. 2528	. 2517	.00104	1	152	0.21
Intercept Differences for Sex	8	9	.2517	.2517	.00002	1	153	0.00

<sup>\*</sup> P < .01.

<sup>\*\*</sup> P < .001.